



## Tree Condition Assessment for St Agnes Gardens, Bristol

### Inspected and prepared by

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### Prepared for

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### Report date

6<sup>th</sup> February 2024

### Site address

Land adjacent St Agnes Gardens  
Bristol  
BS4 2DQ

### Report reference

StAgnes\_TCA\_022023

### Project

Tree condition  
assessment

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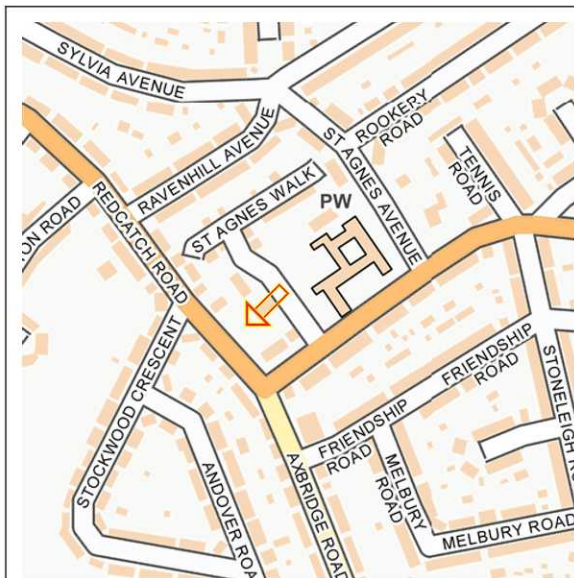
**Appendices**

- A Tree Survey Schedule
- B Tree Location Plan
- C Quantified Tree Risk Assessment (QTRA) non-technical summary

## 1.0 Instructions

1.1 I am Stuart Roberts, a chartered arboricultural consultant, and I have been instructed by Ola Adeitan of Residential Management Group Ltd to assess trees located within an area of land adjacent St Agnes Gardens (figures 1 and 2) and comment on the following:

- The health and condition of the trees within the assessment area.
- An assessment of the risk presented by any trees with identified defects or by tree health issues that through failure could cause injury or damage.
- Management recommendations appropriate to mitigate an identified risk.
- General comments on the management of the trees.



**Figure 1:** Site location indicated by orange arrow.  
<https://www.streetmap.co.uk/map>



**Figure 2:** Approximate limits of site survey indicated by red line.  
<https://www.google.com/maps>

## 2.0 Introduction

2.1 The area subject of this tree condition assessment is a public open space located between St Agnes Gardens and Redcatch Road in the Knowle area of Bristol. There are a significant number of trees along the west site boundary including several large mature specimens. Below the mature tree canopy are groups of young self-seeded trees and there are a number of planted trees within the open space including new plantings and semi-mature trees.

### 3.0 Statutory constraints

- 3.1 A review of Bristol City Council (**BCC**) online resources<sup>1</sup> reveals that the site does not lie within the limits of a Conservation Area and that there are thirteen trees on the site indicated as being the subject of a group Tree Preservation Order (**TPO**) number 463. It is currently necessary to obtain consent from BCC to work on any of the trees that are subject of the TPO.
- 3.2 The Wildlife and Countryside Act 1981 (as amended), Countryside and Rights of Way Act 2000, and The Conservation of Habitats and Species Regulations 2017, afford statutory protection for listed species of flora and fauna including birds and bats which are likely to use trees for nests and roosts. It is essential that any tree works do not disturb a nesting bird, bat or bat roost. If there is potential for nesting birds or roosting bats to be using a tree scheduled for works then a qualified ecologist should be consulted.

### 4.0 Report limitations

- 4.1 This tree condition assessment has been carried out from ground level and observations have been made solely from visual inspection with the use of non-invasive hand tools. No decay detection equipment has been used in assessing tree condition.
- 4.2 The assessment findings, conclusions and work recommendations contained within this report relate to the conditions found at the time of inspection. The trees will need to be re-assessed if there are any significant changes to the site that may affect the trees such as building works, changes in ground level, excavations within the crown spread of the tree or extreme weather events.
- 4.3 Trees have been assessed considering their health and condition, no assessment has been made regarding the potential of trees on the site to cause subsidence or below ground damage to structures on or adjacent to the site.

### 5.0 Data collection

- 5.1 All trees were visually assessed from ground level using the Visual Tree Assessment (VTA) method (*Mattheck and Breloer, 1994*). Trees identified as requiring tree works have been tagged where possible, data has been recorded in the Tree Survey Schedule (Appendix A) and the location of the trees has been marked on the Tree Location Plan (Appendix B).

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<sup>1</sup> <https://maps.bristol.gov.uk/pinpoint/>



5.2 **Risk assessment system:** The level of risk presented by a tree recorded in the assessment has been quantified using the Quantified Tree Risk Assessment (QTRA)<sup>2</sup> method for which I am a licenced user<sup>3</sup>. QTRA applies established and accepted risk management principles to tree safety management in accordance with ISO 31000:2009, *Risk management – Principles and guidelines*, which is published by the National Standards Agencies. QTRA outputs are presented in Table 1, more information on the QTRA system of risk assessment can be found at Appendix C.

THRESHOLD	DESCRIPTION	ACTION
>1/1 000	<b>UNACCEPTABLE</b> Risks will not ordinarily be tolerated	<ul style="list-style-type: none"> <li>Control the risk</li> </ul>
<b>1/1 000</b>		
1/1 000 To 1/10 000	<b>UNACCEPTABLE</b> Risks will not ordinarily be tolerated where imposed on others	<ul style="list-style-type: none"> <li>Control the risk</li> <li>Review the risk</li> </ul>
	<b>TOLERABLE</b> Risks may be tolerated if those exposed to the risk agree to accept it, or the tree has exceptional value	<ul style="list-style-type: none"> <li>Control the risk unless there is broad stakeholder agreement to tolerate it, or the tree has exceptional value</li> <li>Review the risk</li> </ul>
<b>1/10 000</b>		
1/10 000 To 1/1 000 000	<b>TOLERABLE</b> Risks are tolerable (where imposed on others) if as low as reasonably practicable (ALARP)	<ul style="list-style-type: none"> <li>Assess costs and benefits of risk control</li> <li>Control the risk only where a significant benefit might be achieved at reasonable cost</li> <li>Review the risk</li> </ul>
<b>1/1 000 000</b>		
<1/1000 000	<b>BROADLY ACCEPTABLE</b> Risk is already ALARP	<ul style="list-style-type: none"> <li>No action currently required</li> <li>Review the risk</li> </ul>

**Table 1:** QTRA Advisory Risk Thresholds

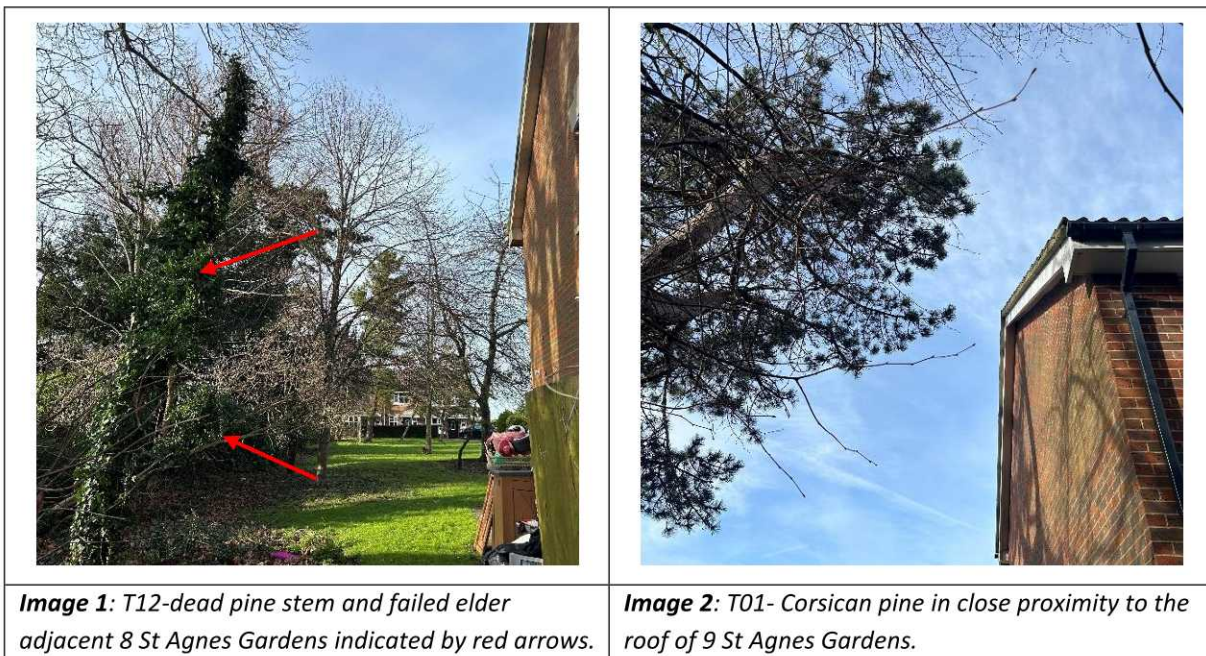
5.3 The risk of harm output should be used to prioritise the order of tree works, actioning the trees with the highest risk of causing harm first. Works to trees with risks identified as being in the *Tolerable* risk range must be considered by the trees manager balancing the benefits of the trees in terms of amenity and ecological value against the cost of risk reduction measures. Where risk reduction comes at a disproportionately high cost, the risk control measure can be said to be unreasonable or disproportionate.

<sup>2</sup> <http://www.qtra.co.uk/>

<sup>3</sup> Licence number 2662

## 6.0 Findings summary

- 6.1 All of the trees on the site that are the subject of a TPO (T01-T11) were recorded in the tree survey schedule along with one tree that was recorded due to poor condition that is not subject of a TPO (T12).
- 6.2 T12 is a small dead ivy-covered pine stem (image 1) with a weight bias towards the west elevation of number 8 St Agnes Gardens, it has a high likelihood of failure but is unlikely to cause damage to the building due to the relatively small size and poses a low risk of causing injury due to relatively low frequency of use of the target area<sup>4</sup> of the tree. T12 is the only tree recorded in the interest of risk mitigation. There is also a small elder 4 metres to the north-west of T12 that has partially failed. Both trees should be removed.
- 6.3 One Corsican pine (T01-tagged 630) has been recommended for minor crown pruning as it has branches growing within 1 metre of the roof of number 9 St Agnes Gardens (image 2) which can lead to structural damage and can facilitate pest (squirrel) ingress to the property.



- 6.4 Of the 13 trees listed by BCC as being covered by a TPO (No. 463) only 11 are still present. Two horse chestnut trees have been removed from site, I can find no reference to an application for their removal on the planning portal so assume they failed and were subsequently removed without an application needing to be made.

<sup>4</sup> The area adjacent to a tree that will be impacted if the tree fails.



- 6.5 The trees subject of the TPO are generally in good health and condition. Many have clearly had crown reduction and crown lifting works with good clearance over Redcatch Road (image 3), with 1-2 years regrowth from the pruning wounds, which is consistent with a tree work application to BCC in October 2021 (ref: 21/05414/VP). None of the TPO trees had a defect that could lead to a foreseeable failure and no works are recommended in the interest of risk mitigation.
- 6.6 Two of the TPO lime trees (02 and 11) have epicormic growth<sup>5</sup> around the base of the trees which prevents thorough inspections of the buttress and lower stem, management recommendations have been made to remove the epicormic growth from both trees.
- 6.7 There are 3 young lime trees planted below the crown spread of T03 (a mature yew) and have developed severely suppressed crown forms as a result (image 4). The lime do not pose a risk and will not adversely impact T03 but will never develop a good crown form. The pro-active removal of the lime should be considered, there is potential that with care, the youngest lime to the north could be transplanted.



**Image 3:** Good crown clearance over Redcatch Road.



**Image 4:** Young limes suppressed by the canopy of mature yew indicated by red arrows.

- 6.8 The competition with trees to the north and the south has caused T03 to develop a crown bias to the east which the resident of number 9 St Agnes Gardens expressed concern about, as the extended easterly branches are causing shading issues to his property. This is undeniably the case and the eastern extent of the crown could be reduced by 1-2 metres to alleviate the issue. This is essentially a management decision as there is no risk associated with the issue and no arboricultural need for the works.

<sup>5</sup> Shoots arising from dormant buds in a tree's main stem or framework branches.



- 6.9 There are three pine planted within the open space to the east of tree 04 (image 5), a local resident expressed concern regarding the height of the west tree and the suitability of the trees for their location. I measured the height of the west pine (Monterey pine) as 16m tall and found no issues with the form or condition that could lead to a foreseeable failure. It should be noted that the pine has the capacity to reach a significantly larger size. There is a young pine in the centre of the three trees that is developing poor crown form due to suppression from the other two pines and it would be reasonable to remove this tree in the interest of good long term management to the benefit of the two adjacent pine.
- 6.10 A young lime was noted in a tree shelter adjacent to the three pine, the young tree had two tree ties that were tight and in need of adjustment, if not adjusted they are likely to cause irreversible stem damage during the 2024 growing season.



**Image 5:** Row of 3 pine in public open space with the middle tree developing poor form.



**Image 6:** Newly planted lime with tree ties in need of adjustment.

## 7.0 Recommendations

- 7.1 Full tree work recommendations are made within the Tree Survey Schedule at Appendix A. All tree works should be carried out by reputable, skilled and insured tree work contractors working in accordance with the guidance contained within *BS3998: 2010 Recommendations for Tree Work*.




- 7.2 As a minimum I recommend that T12 is removed along with the failed elder 4m to the north-west, the pine (T01) is reduced to allow 3 metres clearance from the roof of number 9 St Agnes Gardens and the epicormic growth is removed from the base of trees 02 and 11. The works to trees 01, 02 and 11 must be the subject of a TPO application to BCC, the works to tree 12 and the adjacent elder do not require consent from BCC.
- 7.3 The management works discussed within paragraphs 6.7- 6.10 do not need to be implemented to discharge the duty of care of the landowner, they are proactive management recommendations that should be considered as part of the management objectives for the area.
- 7.4 I recommend that the trees on the site are inspected within 24 months from the date of issue of this report by an arboricultural surveyor with a minimum of a level 3 arboriculture specific qualification.

## Appendix A: Tree Survey Schedule





<b>Tree Survey Schedule</b>	 <b>ASSURED TREES</b>
<b>Client:</b> Ola Adeitan, Residential Management Group Ltd, Louisa Ryland House, Newhall Street, Birmingham, B3 3PL	
<b>Location:</b> Land adjacent St Agnes Gardens, Bristol, BS4 2DQ	
<b>Surveyor:</b> Stuart Roberts	
<b>Date:</b> February 2024	

No. (Tag No.)	Tree Name (species)	Height (m)	Stem Diameter (mm)	Age Class	Location and	Condition Notes	Recommendations	QTRA risk rating
01 (630)	Corsican pine	10-15	500-600	M	5 metres south of number 9, 1m from the west boundary wall.	Twin stem from 2m from good union, invasive metal cable brace installed to west limb with little tension, major dead wood, crown within 1m of the building at 9 St Agnes Gardens. Subject of TPO.	Reduce crown to allow 3 metres clearance from the south elevation of no 9 St Agnes Gardens.	<1/1m
02	Lime	15-20	600-750	M	5m south-west of 9 St Agnes Gardens on the west site boundary.	Minor epicormic growth around base of tree, minor dead wood, triple stem from 3m from good union, major dead wood (over 25mm diameter) in upper crown to north, failure will impact grass verge and is low risk. Subject of TPO.	Remove epicormic from base.	<1/1m
03	Yew	10-15	500-600	M	Mature Yew immediately adjacent T02 on the west site boundary.	Crown suppressed to north with extended laterals to the east and west, no failure risk but the east side of the crown is causing shading issues to no 9. 3x young limes planted within crown spread to north and east that are severely suppressed with poor long term viability. Subject of TPO.	Consider removal of 3 young lime within canopy spread to north and east.	<1/1m
04	Corsican pine	15-20	600-750	M	Large pine on site boundary 12m south of 9 St Agnes Gardens.	Good condition, group of young, suppressed robinia, lime and sycamore within crown spread to south and east. Subject of TPO.	None.	<1/1m
05	Lime	15-20	750-1000	M	Large lime opposite the side elevation of 17 St Agnes Gardens. To the rear of a large stone structure.	Lower crown reduced to west, minor dead wood, good condition. Young sycamore and horse chestnut within crown spread to north and shrub masses to south. Subject of TPO.	None.	<1/1m
06	Corsican pine	15-20	500-600	M	Single stem pine 17m north of 8 St Agnes Gardens.	Prolific ivy on main stem, non-progressive stem lean to the east, young maple and hawthorn stems within crown spread to south. Subject of TPO.	None.	<1/1m

No. (Tag No.)	Tree Name (species)	Height (m)	Stem Diameter (mm)	Age Class	Location and	Condition Notes	Recommendations	QTRA risk rating
07	Lime	15-20	750-1000	M	Large lime 10m north of 8 St Agnes Gardens.	Twin stem from 2.5m from good union, crown significantly reduced, semi mature yew within crown spread to south. Subject of TPO.	None.	<1/1m
08	London plane	20-25	1000+	M	Large plane 10m to the west of 8 St Agnes Gardens.	Prolific ivy on trunk and in lower crown, branches to the east are within 1m of overhanging the roof of no 8 St Agnes Gardens. Subject of TPO.	None.	<1/1m
09	Norway maple	10-15	400-500	Sm	Maple 10m west of 8 St Agnes Gardens.	Suppressed beneath crown of adjacent London plane, crown bias south, prolific arboreal ivy. Subject of TPO.	None.	<1/1m
10	Lime	15-20	750-1000	M	Lime 5m west of rear garden fence of 8 St Agnes Gardens.	Prolific ivy on main stem and lower crown. Crown bias south. Crown significantly reduced. Subject of TPO.	Subject of TPO.	<1/1m
11	Lime	15-20	600-750	M	3m west of rear garden fence of 8 St Agnes Gardens on south site boundary.	Single stem lime, crown significantly reduced, profuse epicormic growth around base preventing basal inspection. Subject of TPO.	Remove epicormic from base.	<1/1m
12 (631)	Pine	0-5	200-300	Y	Small pine 4.5m to the side of 8 St Agnes Gardens., there is a further small elder 4 metres to the north-west.	Dead tree with prolific arboreal ivy and a stem lean towards the side of number 8 St Agnes Gardens. An elder 4m to the north-west has partially failed at the root plate to the north-east. Not subject of TPO- no consent required for works.	Fell dead pine stem and remove partially failed elder stem 4m to the north-east.	<1/1m





## Appendix B: Tree Location Plan







**LEGEND**

Tree number  
 Tree number as it appears in the tree survey schedule

Indicates approximate group outline



Project Name:  
 St Agnes Gardens  
 Tree condition assessment

Drawing Title:  
 Tree location plan

Drawing Number:  
 StAgnes-TLP-01

Client:  
 Ola Adeitan

Date:  
 February 2024

Scale:  
 Not to scale

## Appendix C: QTRA (Quantified Tree Risk Assessment) non-technical summary Risk

Tree safety management is a matter of balancing the Risk of Harm from falling trees with the benefits from trees. Although it may seem counter intuitive, the condition of trees should not be the first consideration. Instead, tree managers should first consider the usage of the land on which the trees stand, which in turn will inform the process of assessing the trees.

Quantified Tree Risk Assessment (QTRA) applies established and accepted risk management principles to tree safety management in accordance with ISO 31000:2009, *Risk management – Principles and guidelines*, which is published by national standards agencies. By quantifying the Risk of Harm as a probability, QTRA enables the tree manager to manage the risk from tree failure to widely accepted risk thresholds.

Using the QTRA approach, the land-use (people and property) upon which trees could fail is assessed and quantified first. This enables tree managers to determine whether or not and to what degree of rigour a survey or inspection of the trees is required. Where necessary, the tree or branch is then considered in terms of both size (potential impact) and probability of failure. Values derived from the assessment of these three components are combined to calculate the risk of harm as a probability, which can then be compared to advisory levels of risk acceptability.

The method moves the management of tree safety away from labelling trees as either ‘safe’ or ‘unsafe’, thereby requiring definitive statements of tree safety from either tree surveyors or tree managers. Instead, QTRA quantifies the risk of significant harm from tree failure in a way that enables tree managers to balance safety with tree value and operate to predetermined risk thresholds.

By taking a QTRA approach to tree risk, tree managers commonly find they spend less resources on assessing and managing tree risk, whilst maximising the benefits their tree populations provide. Furthermore, in the event of a ‘tolerable’ or ‘acceptable’ tree risk being realised, they are in a robust position to demonstrate that they have acted reasonably and proportionately. Table 1 contains a description of the risk of harm thresholds and required actions.

THRESHOLD	DESCRIPTION	ACTION
<b>&gt;1/1 000</b>	<b>UNACCEPTABLE</b> Risks will not ordinarily be tolerated	<ul style="list-style-type: none"> <li>Control the risk</li> </ul>
<b>1/1 000</b>		
<b>1/1 000</b> To <b>1/10 000</b>	<b>UNACCEPTABLE</b> Risks will not ordinarily be tolerated where imposed on others	<ul style="list-style-type: none"> <li>Control the risk</li> <li>Review the risk</li> </ul>
	<b>TOLERABLE</b> Risks may be tolerated if those exposed to the risk agree to accept it, or the tree has exceptional value	<ul style="list-style-type: none"> <li>Control the risk unless there is broad stakeholder agreement to tolerate it, or the tree has exceptional value</li> <li>Review the risk</li> </ul>
<b>1/10 000</b>		
<b>1/10 000</b> To <b>1/1 000 000</b>	<b>TOLERABLE</b> Risks are tolerable (where imposed on others) if as low as reasonably practicable ( <b>ALARP</b> )	<ul style="list-style-type: none"> <li>Assess costs and benefits of risk control</li> <li>Control the risk only where a significant benefit might be achieved at reasonable cost</li> <li>Review the risk</li> </ul>
<b>1/1 000 000</b>		
<b>&lt;1/1000 000</b>	<b>BROADLY ACCEPTABLE</b> Risk is already ALARP	<ul style="list-style-type: none"> <li>No action currently required</li> <li>Review the risk</li> </ul>

QTRA Advisory Risk Thresholds