



Cambridge Terrace, Oxford

ARBORICULTURAL IMPACT ASSESSMENT

Site: Cambridge Terrace, Oxford

Postcode: OX1 1RR

Client: The Dean & Chapter of the Cathedral of Christ in Oxford of the Foundation of King Henry 8

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Position: Director

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1. INSTRUCTION

- 1.1 I have been instructed to prepare an assessment of the impact on the existing tree stock by the proposed reconfiguration of the cycle store and the construction of a new lobby at 1 Cambridge Terrace, Oxford ('the Site').

2. TREE SURVEY

- 2.1 A tree survey was undertaken on 2nd February 2021 in accordance with the guidance provided by BS5837 (2012) *Trees in relation to design, demolition and construction – Recommendations* ('BS5837').
- 2.2 There is only one tree on site, a mature silver maple that is growing in a raised planter, surrounded by hard standing formed from block paving to the north and a sealed tarmac dammed road to the south. There are numerous inspection chambers for underground utilities that surround the tree.
- 2.3 The details of the tree have been categorised in accordance with Table 4 of BS5837 which provides guidance on the quality and non-fiscal value that trees have to offer over a 40-year time frame. This tree has been categorised as a Grade B tree, considered to be of moderate quality with an estimated remaining contribution of at least 20 years.
- 2.4 The Root Protection Area ('RPA') of the tree has been calculated in accordance with the formula defined in BS5837. This provides for an area of ground equivalent to 12x the stem diameter of the tree at 1.5m above ground level. The RPA forms an initial Construction Exclusion Zone ('CEZ'), and the default position is that there will be no development within this area. The RPA is plotted as a circle around the tree and is identified on the tree plan by a magenta line with the text 'RPA' inscribed.
- 2.5 Paragraph 4.6.3 of BS5837 suggests that it may be acceptable to deviate from the circular plot of the RPA if the disposition of the roots is influenced by past or existing site conditions, for example the presence of roads, structures and underground apparatus. The tree at the Site is surrounded on all sides by site conditions that could affect the disposition of the roots and so no adjustment has been made to the shape of the RPA.
- 2.6 The above ground constraints are defined as the canopy spread of each tree, measured on the cardinal points from the tip of the live growth at the outer edge of the canopy, to the stem of the tree. This is plotted on the tree plan as a hatched area in the corresponding BS5837 tree category as detailed in Table 1 below:

Table 1: Summary of BS5837 categorisation colours

Category	Colour	Description
A	Green	Trees of high quality with an estimated remaining life expectancy of at least 40 years
B	Blue	Trees of moderate quality with an estimated remaining life expectancy of at least 20 years
C	Grey	Trees of low quality with an estimated remaining life expectancy of at least 20 years
U	Red	Those trees 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

3. DEVELOPMENT PROPOSAL

- 3.1 The development proposal is for a reconfiguration of the existing cycle store at the Site, to improve access to the site while maintaining a secure location for the storage of bicycles. A new entrance lobby will also be constructed on the southern façade of the building.



Plate 1: The proposed development will reconfigure the cycle store under the building to the east of the tree, while the southern faced to the north west will have a new lobby.

4. ARBORICULTURAL IMPACT ASSESSMENT

- 4.1 This section of the report should be read in conjunction with the tree plan (43-CAM-DRW-AIP-01) and schedule of recorded trees (43-CAM-INF-SCH-01) that accompany this report.
- 4.2 The proposed scheme will not require the removal of T1.

- 4.3 The default position of any development should be that there will be no encroachment of the RPA of retained trees. Where encroachment is unavoidable, there must be an overriding justification for this.
- 4.4 The proposed reconfiguration of the cycle store will have no impact on the tree as all works are taking place above ground, and in the space forming the existing storage area. The construction of new security walls will not affect this tree as these are to be suspended from the existing structure rather than constructed from the ground up.

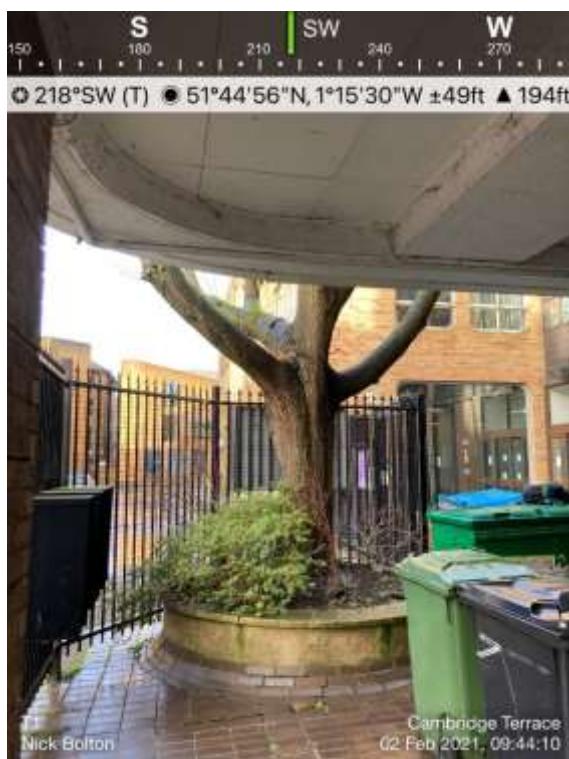


Plate 2: New wall will be suspended from the roof of the existing cycle store and will not affect the tree

- 4.5 The new lobby area to the building does have the potential to impact the tree as it will encroach the RPA by approximately 12m² which equates to about 7% of the total RPA. This potential disturbance is necessary to allow the formation of a 450mm deep strip foundation for the lobby to be built on.
- 4.6 The existing ground surface in this area is porous block paving, laid over a compacted sub-base. The estimated depth of the block paving and sub-base is approximately 350mm, and this will form an inhospitable growing medium for roots from T1. It is possible that roots from the tree will be found immediately below the sub-base, but existing underground utility service ducts means that any roots are likely to be limited to very small diameter fibrous roots that take up moisture and nutrients from the ground. Such roots are short lived, growing and dying during each growing season and their loss will not affect the tree provided that there is sufficient suitable soil for new roots to grow in during future growing seasons.
- 4.7 The tree has been planted in a raised bed and the base of the tree is approximately 0.5m above the surrounding surface. The topographical survey for the site shows that there is:
 - An underground channel for CATV 1.5m to the south west of the planter base,

- A surface water run off gully 2.5m to the west of the planter base,
 - A BT chamber 3m to the west of the planter base,
 - Two gas valves about 3m to the west of the planter base
 - A foul drain inspection chamber approximately 6m to the south west of the planter base in the centre of the public highway.
- 4.8 In addition to the above underground apparatus, there is a public footpath over the RPA, set outside the existing site fencing, and the public highway (Cambridge Terrace) to the south of the footpath. As an adopted highway, the surface of this road will be non-permeable and non-porous although there is an area of relatively open ground to the south of the highway.
- 4.9 The combination of the existing structures, both above and below the surface, indicates to me that the top layer of soil under the surface is not a viable rooting environment and that the roots of this tree are likely to therefore extend below this to an area of relatively undisturbed and uncompacted soil. Most of the underground apparatus will be located in trenches that are at least 650mm in depth and therefore in my opinion, the roots of the tree will be below this depth. Any disturbance to soil in the top 650mm is therefore unlikely to have an impact on the long-term health of the tree.
- 4.10 The proposed above ground works will not affect the microclimate around the tree as the new lobby is a small extension to an existing recess, so the wind dynamics will be unaffected, and the tree will be exposed to the same level of light as with the existing building. The new lobby is a single storey extension and although it will be glass fronted, this will not significantly increase the amount of reflected light and heat from the building into the canopy of the tree, the lower branches of which are above the height of the new lobby.

5. PLANNING POLICY ASSESSMENT

- 5.1 Oxford City Council has prepared the Oxford Local Plan 2036 to define its policies in relation to planning and development. There are three policies relevant to trees and this proposal is assessed against these policies in Table 2 below.

Table 2 - Local Planning Policy review

Policy Number	Policy Title	Brief Description	Relevance to this application
H14	Privacy, daylight & sunlight	This policy requires consideration be given the privacy, daylight and sunlight by accounting for any existing and proposed hedges and trees.	The refurbished cycle store is not affected by the presence of the existing tree in terms of light or privacy. The new lobby is located to the north west of the tree, but the tree will not overshadow this or prevent sunlight from getting to the lobby due to the presence of the existing building which acts as a barrier to the east. The proposal meets the requirements of this policy insofar as it relates to trees.
G7	Protection of existing Green Infrastructure	This policy states that planning consent will not be granted for proposal that result in the loss of green infrastructure features unless it can be demonstrated that such loss is unavoidable and can be mitigated.	This proposal does not result in the loss of any trees and therefore the proposal meets the requirements of this policy insofar as it relates to trees.
G8	New and enhance Green and Blue Infrastructure Network Features	This policy applies to development schemes that will affect existing green infrastructure.	This proposal does not require the loss of any trees and therefore the requirements of this policy are not relevant to this application.

6. TREE PROTECTION MEASURES

- 6.1 The tree protection measures will be through the use of barriers that will be erected prior to any development commencing, including the mobilisation of machinery or materials. The fencing will form the boundary of the defined CEZ and there will be no access into this area during the development phase. This fencing will remain in situ until the construction has been completed and all machinery and materials are removed from the site.
- 6.2 The fencing will be erected around the base of the planter and will be to a minimum height of 2m.
- 6.3 Within the CEZ there will be:
 - No storage of materials, or access for construction workers or machinery.
 - No level changes.
 - No excavation.
 - No fires.

7. CONCLUSION

- 7.1 I conclude that this development scheme can be completed with no long-term negative impact on the contribution that the existing tree offers to the site.
- 7.2 Tree protection measures will ensure that the tree does not come to harm from activities that occur during the construction phase.
- 7.3 The proposal is in accordance with local planning policy insofar as it relates to trees.

8. ABOUT THE AUTHOR

- 8.1 I am a director of Tree Frontiers Ltd and a chartered arboricultural consultant, with a first-class honour's degree in arboriculture from Myerscough College, accredited by the University of Lancaster.
- 8.2 I have 19 years' experience working in the sector and am a chartered member of the Institute of Chartered Foresters. I am also a professional member of the Arboricultural Association and abide by the code of ethics and professional standards of these institutions.

9. REFERENCES

- 9.1 This report has relied upon the following external reference sources:
 - British Standards Institution (2012) BS5837: *Trees in relation to design, demolition and construction – recommendations*. London: BSI
 - Matheck, C. & Breloer, H. (1994) *The Body Language of Trees – A handbook for failure analysis*.