

Street Trees of Oxford

Sarah Robinson – April 2016

Introduction

Trees are a common part of the urban environment yet these 'street trees' are rarely given much thought by passersby. This trail guide through the historic city of Oxford hopes to provide an overview of the value that trees add to the urban environment, the threats that they face in this setting, and ways to help these trees survive and even thrive in our cities.

Practical Points

Walking Distance: 2.1km (1.3 miles)

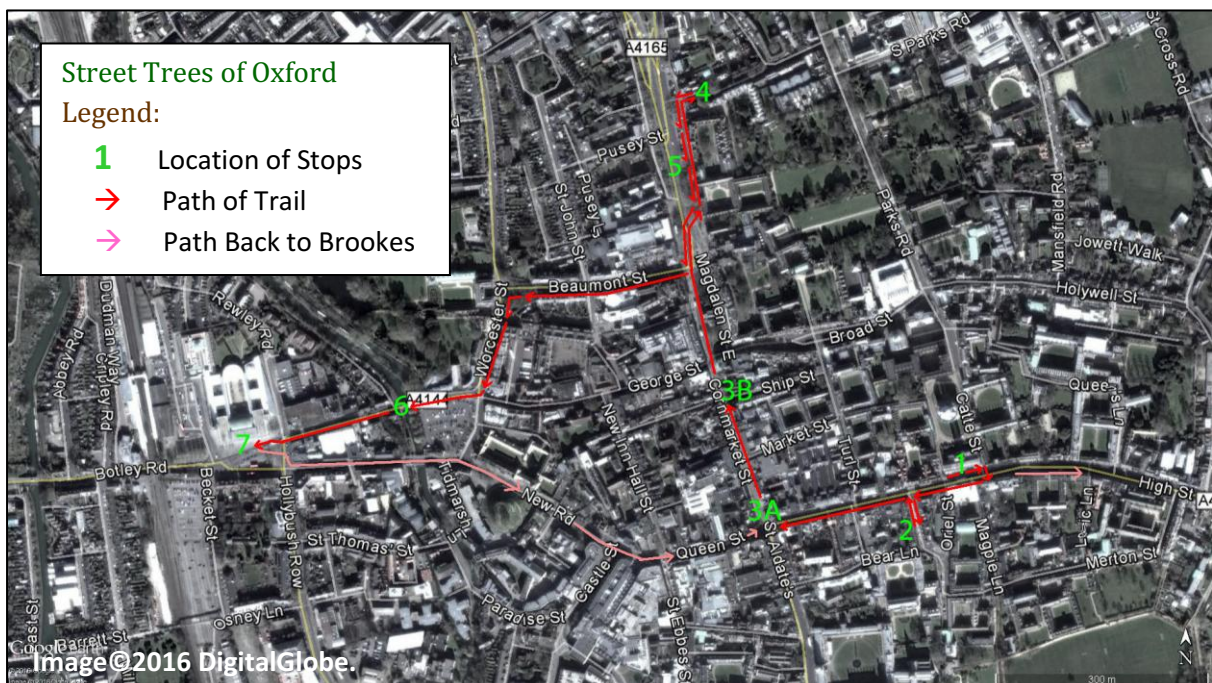
Walking Time: 30 minutes

Overall Time with activities: 60 minutes

This trail goes through the City Centre of Oxford and so the walk is easy and generally accessible. Take the same amount of care that you normally would in an urban environment, always checking for traffic, especially cyclists as there are many in Oxford. Dress for the weather which can change quickly.

What to Bring:

- Dry wipe marker (if trail guide is laminated – pencil or pen if not)
- Tape measure
- Plastic bag to clean up garbage
- Tree Identification book (Optional, if you would like to learn about the trees we see. Note that this trail is not about tree identification and no prior knowledge of trees is required.)



Stop 1: Beautiful Trees at University Church of St Mary the Virgin

Themes: Aesthetic Value, Threatened by Mismanagement

Getting there: If coming from Oxford Brookes Headington Campus, you can take the U1 bus from stop B5 outside the John Henry Brookes Building to the stop at Queen's Lane or Carfax Tower. Alternatively it takes about half an hour to walk straight down Headington Road which turns into High Street.

What to do: Note the 4 trees along High Street beside the church. There are 3 together and one on its own. The two closest to the City Centre are spring flowering species, a cherry and a magnolia. The other two are non-flowering species and put out leaves later in the season. With this in mind, what management differences are there between the flowering and non-flowering trees? Does there seem to be a bias?

What to note: The original use of trees in an urban environment is to improve the aesthetics of the street (Seamans, 2012). The trees here are good examples of this as they soften the hard edges of the building and add organic forms to the city. They also visually protect the church from the street and two of them bloom to add colour and interest. However these trees are also under threat: age has knocked the tree to the left of the main entry over and mismanagement has deformed the two non-flowering trees as well. It is interesting to note that conservation efforts are quite clear with the flowering cherry, which has been propped up. Yet with the two non-flowering trees, little care seems to have been taken: there is parasitic mistletoe growing on one and the other has been unattractively trimmed back. Learning to value all street trees for reasons other than just their immediate aesthetic value helps to reduce the threat of improper care, leading to better conserved – and so generally more beautiful – specimens.

Stop 2: Trees are Worth More at Oliver James

Themes: Economic Value, Threatened by Under-Appreciation

Getting there: Use the crossing at the end of St Mary's Church to get to the other side of High Street. Walk towards the City Centre about 100m to King Edward Street, a left hand turn. About 40m down on the right is Oliver James, an Estate Agent.

What to do: Look at the advertisements of properties in the windows of this estate agent. What percentage of them highlight gardens or trees as a part of the property? Also look at the pictures of the properties. Have any of them been taken to highlight the presence of trees on the site? Further see if you can find any loose correlation between the listed price of the properties and the existence of trees or gardens within it.

What to note: There is great economic value in having trees in the urban environment. Neighbourhoods with trees are seen as more desirable and having trees on a property will increase its value (Mullaney, 2015). Further, consumers will spend more money in shopping areas that include trees (Mullaney, 2015). However this value is threatened by the fact that this gain is often hidden as street trees themselves have no market value and so the economic benefits of trees are not always counted by home owners or local authorities - though the cost of maintaining them is often highlighted (Mullaney, 2015). To help better conserve urban trees, local councils and individuals ought to fully understand the value of having trees as a part of the cityscape them rather than see them as a burden.

Stop 3A: Busy Environments Unpleasant for Everyone

Themes: Threatened by a Challenging Environment

Getting there: Turn back to High Street and turn left on it, continuing down further into the City Centre. Walk about 200m until you reach the intersection of High Street (which turns into Queen Street) and Cornmarket/St Aldates Street.

What to do: Observe this busy area with all your senses.

What to note: The things that make this area unpleasant for people – like the lack of shelter from sun and wind, the smells, sound and closeness of traffic – also make the area unpleasant for plants to grow in (Trowbridge and Bassuk, 2004). Urban areas are often extra hot from reflected heat, or overly shaded from buildings. They can be very open and so with high, channelled winds. The air pollution from passing vehicles is also a challenge for trees in this environment. Perhaps that is part of why there are so few trees here!

Stop 3B: Trees Would Make Things Better on Cornmarket

Themes: Value in Improving the Experience of the Street

Getting There: Carefully cross the roads to turn right on Cornmarket Street, a street for pedestrians only. Walk about 180m to the intersection of Ship Street, St Michael's and Cornmarket.

What to do: Look ahead further down Cornmarket Street (which turns into Magdalen Street) and note the trees that line the road ahead. Compare that to the view from behind you, back down Cornmarket. Note the different feel of the streets with and without trees. Using your dry wipe pen, draw in some trees on the photograph of Cornmarket Street (Figure 1) in this guide. How does having trees change the look and feel of the street?



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Figure 1 - Add some trees to Cornmarket

What to note: Trees help to form a street's structure: framing views, marking entries, and enclosing space, creating the feeling of walls and a ceiling overhead (Nabels and Oberlander, 1977). As you walk to the next stop, compare your experience walking under the trees to what it was like not to have those trees, as it was from Cornmarket.

Stop 4: Celebrity Trees in Oxford

Themes: Cultural Value, Threatened by Ignorance

Getting There: Continue down Cornmarket Street away from the City Centre. At the Martyrs' Memorial, continue straight but on the far right side of the road that is now St Giles. Walk 200m to the pub called Lamb and Flag. Just before this pub is an opening in the buildings named Lamb and Flag Passage. Turn right into this passage and stop at the large tree.

What to do: This large tree is featured in a novel yet you wouldn't know it from just passing by. If you were to design a sign to help inform people of this tree's value to help conserve its meaning and the tree itself, what information would be helpful to know? Design a signage system that you would like to use and read for trees with such cultural value.

What to note:

'... and Harriet, cornered in the shadow of the big horse-chestnut by the Lamb and Flag . . .' (Sayers, 1936, chapter 10).

This tree is the one mentioned in the popular 1930's mystery novel *Gaudy Night* by Dorothy L. Sayers. Like many other trees in Oxford, it has a cultural and historical meaning attached to it. Other examples of such notable trees include trees thought to have helped inspire parts of Lewis Carroll's *Alice in Wonderland* at Christ Church College and at Merton College there is a tree under which J.R.R. Tolkien used to write his books such as *The Lord of the Rings*. (If you would like to see and learn more about these and other culturally significant trees, please refer to *Oxford Trees* by Sophie Huxley, noting that many of these trees are not freely accessible to the public.) Importantly, such specimens are examples of how when trees are set in an urban environment, they become embedded in people's lives and events so that they have cultural value – yet the lack of information and awareness of this often threatens these trees as they do not receive the benefits of this value; greater awareness is needed.

Stop 5: Street Trees along St Giles

Themes: Structural & Historic Value, Threatened by Urban Conditions

Getting there: Turn around to go back out to the main road, turning left back towards the City Centre. Along this road on both sides are several large street trees, many of which we will be looking at for this next stop. Some of these trees are amongst a roadway and parking area. Be very aware of the traffic at this stop and please be courteous to drivers.

What to do: Notice that the trees planted right within the parking area are the same species as some of the ones planted further down, in front of St John's College – an area that is raised and not paved. Using a tape measure, compare the widths of these trees at a height of 1.3 metres above ground level.

What to note: The trees planted right in the pavement generally have a smaller girth than those planted in and surrounded by soil. This difference is because a tree's environment will greatly affect how well it can grow (Trowbridge and Bassuk, 2004). Those in the pavement are surrounded by hard, impermeable surfaces so that air, moisture and water cannot get to the roots. Having cars and bikes parked on top creates potential for physical damage to the trees. Further, the trees in this place will likely have less soil volume which is more heavily compacted by the traffic, making it hard for them to survive. However despite these challenging conditions, trees are very valuable in this

location: they provide shade to the parked cars and pedestrians, they line the street which has been shown to reduce the speed of traffic (Ewing and Dumbaugh, 2009) and they also have historic value. If you stand past St John's College looking up St Giles and away from the City Centre, you can compare this tree lined view to the one in the engraving from 1779 shown in Figure 2 (Rooker, 1779). Good methods of conserving street trees can be seen in the trees in front of St John's College: they are tagged to identify them for long term care. Further it should be noted that in this area there are several different species and ages of trees – this helps to ensure that the area is never completely without trees since even if a disease or simply old age affects one tree, not all of them will die at once.



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Figure 2 - 1779 Print of St Giles Street Trees

Stop 6: Small Stream Habitats Improving the Larger Ecosystem

Themes: Ecological Value, Threatened by Human Activities

Getting There: Continue back to the Martyrs' Memorial at the corner of St Giles, Magdalen and Beaumont Street. Turn right onto Beaumont and follow this about 250m, turning left onto Worcester Street. Walk another 140m until you can make a right hand turn onto Hythe Bridge Street. Walk 100m until you reach the bridge over the stream.

What to do: Standing on the bridge, what potential sources of pollution in this area do you notice? Whose responsibility is it to stop or reduce these sources? If there is anything you can safely do to improve the health of this area, or if there is a problem that should be reported to authorities, please do so! Also note how many animals you see using this space, especially compared to the rest of the city.

What to note: You are standing over Castle Mill Stream which includes adjacent trees and other vegetation, creating potential habitats for animals. Trees anywhere in the urban environment can be a habitat and they also are very good at improving the health of an ecosystem: they clean water as they absorb and intercept rain, slowing runoff speeds, helping to prevent erosion as their roots also stabilize slopes, such as along this stream (Nadels and Oberlander, 1977). Unfortunately, treed habitats can also be under threat from sources of pollution, from human activity and from the wrong species being used in an environment (e.g. the weeping willows on the one side of the bridge love water and are doing well but some of the trees on the other side do not like as much water and are not thriving). People can help conserve trees and habitats by leaving dead wood and dense branches

where it is safe to do so and to choose the right species for the conditions of an area. Further, reducing pollution (such as liquids and gases from vehicles including boats; rubbish bins and litter; pet waste and waste from businesses) not only helps the plants survive but also makes the area look more attractive.

Stop 7: Future Heritage & Present Conservation in Frideswide Square

Themes: Good Design for Long Term Survival

Getting There: Continue down Hythe Bridge Street away from the City Centre. Walk about 200m until you reach Frideswide Square. Stop in front of the Said Business School at the raised planters with trees in them.

What to do: How do the trees in the raised planters stand out to you as being different from the other trees we have seen so far?

What to note: Trees in the urban environment are threatened by many things, as we have been looking at all along. In this square the planting of trees has been *designed* to avoid or reduce some of these threats. To ensure that there is enough good soil around the roots, these trees have been set in raised planters which can be filled with fresh soil and also helps avoid polluted water run-off. The soil is exposed and there are air vents (black pipes) at each tree to ensure air is getting to the roots. To help ensure that these trees are getting enough water, notice that there are green bags around each tree which are designed to be filled with water to slowly leak out, providing moisture. Also look carefully for the cleanly trimmed branches on these trees: extra or damaged branches have been cleanly removed to help the trees stay healthy. Another method of helping young trees is through using stakes until they are large enough to support themselves on their own, as these trees now are. All of these are good methods to help new street trees survive and thrive in their environments (Trowbridge and Bassuk, 2004).

Take some time now to draw the ideal conditions for a street tree based on your observations for this trail, considering how you can reduce the threats to improve its chance of survival.

Conclusion

I hope you enjoyed learning about trees in the urban environment and I trust that this introduction will help you appreciate and care for these tenacious plants in their tough environments.

Getting Home: From Frideswide Square you can take a U1 bus back to Headington main campus from stop R10. Alternatively follow Park End Street away from the Square, keeping right on New Road and then left on Queen Street which turns into High Street which can be followed all the way back to the campus.

References

- Ewing, R. and Dumbaugh, E. (2009) 'The built environment and traffic safety', *Journal of Planning Literature*, 23(4), pp.347-367.
- Huxley, S. (2009) *Oxford trees*. Oxford: Huxley Scientific Press.
- Mullaney, J. (2015) 'A review of benefits and challenges in growing street trees in paved urban environments', *Landscape and Urban Planning*, 134, pp.157-166.
- Nadels, I. B. and Oberlander, C. H. (1977) *Trees in the city*. New York: Pergamon Press.
- Sayers, D. L. (1936) *Gaudy night*. New York: Harper.
- Seamans, G. S. (2012) 'Mainstreaming the environmental benefits of street trees', *Urban Forestry and Urban Greening*, 12(1), pp.2-11.
- Trowbridge, P. J. and Bassuk N. L. (2004) *Trees in the urban landscape*. Hoboken: J. Wiley & Sons.

Images

Map: Google Earth Pro 7.1.5.1557, 2014. *Oxford City Centre 51°45'13.54" N 1°15'37.17" W elevation 0m*
[online] Available through: <www.google.com/earth/index.html> [Accessed: 12 April 2016].

Figure 1: Author owned.

Figure 2: Rooker, M. A. (1779) *St Giles in Oxford Almanack* [Engraving]. Available at:

http://www.oxfordhistory.org.uk/stgiles/old_pictures/1779.html (Accessed: 12 April 2016).