ARBORICULTURALIST’S REPORT

April 2019

SITE: Redbourn Lane South, West Common, Harpenden

CLIENT: Harpenden Town Council
Terms of Reference

1.1 This report was requested by Paul Meakins of Wilby Tree Surgeons Ltd, Towerfield Farm, Sywell Lane, Ecton, Northampton, NN6 0QT.

1.2 The instruction to inspect trees at Redbourn Lane South, West Common, Harpenden was received by email.

1.3 The purpose of my inspection and report is to:

   1.3.1 make a visual appraisal of the overall condition of the trees
   1.3.2 identify potential hazards and establish severity
   1.3.3 make recommendations for remedial work
   1.3.4 ensure the duty of care is observed by the trees’ owners and to provide recommendations for any work deemed necessary to prevent failure.
   1.3.5 advise on future management of the trees

Limitations

2.1 The content of this report is valid for a period of three years from the date shown above.

2.2 The report is for the sole use of the client and its reproduction or use by anyone else is forbidden unless written consent is given by the author.

2.3 This is an arboricultural report and as such, no reliance should be placed on comments relating to buildings or soil data.

2.4 This is not a full arboricultural survey. This can be supplied but will be subject to a further fee. Any safety implications identified during the inspection are of course noted within this report.

2.5 My observations and comments are based upon experience with previous cases. I have no formal engineering qualifications.

2.6 The inspection was undertaken from ground level.
The Trees

3.1 Whilst undertaking tree surveys for Harpenden Town Council, I recently came across two areas where most, and in some cases all, the Sycamore trees had suffered damage to their bark as a result of grey squirrel activity. The damage is to all ages and sizes of tree and in some small pockets the damage is also evident on Oak and Ash. The squirrel tends to go for thin barked trees and will affect Beech and Sweet Chestnut too.

3.2 The damage is due to squirrels gnawing at the bark, supposedly to drink the sugar laden sap in the cambium tissue under the bark. It is also considered that it may be part of a male squirrels’ territorial display during mating. The damage caused is immense, and in some areas every single tree has been damaged.

3.3 The result is that once the cambium is exposed, it dries and becomes dysfunctional, leading to either the stem or branch shutting down and dying. Once dead, exposed wood is available to colonisation by fungi. There are a number of wood decay pathogens that can enter the tree and degrade the tree’s structural integrity, which leads to failure. One of the pathogens that can colonise the exposed tissue is Sooty Bark Disease, Cryptostroma corticale. I have identified the pathogen in an area of Pimlico.

3.4 Sooty Bark is a pathogen/ fungal disease of Acer pseudoplatanus. It is characterised by wilt, die-back, bark shedding and by the production of a thick layer of brownish black, dry phialospores in the bark by a fungus invading the cambium and phloem of affected trees. It has spread continuously in the UK but is more prevalent in the south of the country.

3.5 Conclusive evidence of pathogenicity is lacking, but there is strong circumstantial evidence that the fungus is an aggressive parasite. Preliminary inoculation experiments suggest that the fungus is normally spread by air-borne spores entering through wounds and areas where bark has been damaged. Once present in an area, the spores can spread to any tree that has an entry point, such as a bark wound or pruning wound. The pathogen is rapid in causing further bark death and the eventual death of the tree and in previous cases I have seen a large woodland entirely destroyed because of the spread.

3.6 Dr Jean Webber, a tree pathologist with the Forestry Research, an agency of the Forestry Commission, said: "This fungus is what we call a latent pathogen - it can sit within the wood of a perfectly healthy tree for many years, still alive but not active. Then, when the tree is under a period of stress, particularly after we have a severe drought, it is able to gain the ascendancy and bring the tree into a state of decline. When it manages to do that it is able to fruit, and we are able to see the nature of the disease on the bark, which it kills and causes large amounts to fall off."
3.7 Experts say that the number of Sycamore trees that will die from Sooty Bark Disease will depend on this year’s weather. If this summer is hot and dry, the more advanced stages of the disease will become visible: as well as dead bark, the crowns of infected trees start wilting and the leaves will fall off before autumn.

3.8 There is no treatment, so removal of the affected trees is the only way to reduce the amount of active spores that may go on to colonise other Sycamore trees. The Forestry Commission has no specific guidance, but suggests sanitation is wise and likely to be to some degree mitigation.

3.9 The two areas I have surveyed where the squirrel damage is worst have a mix of broadleaf trees present, but in certain areas Sycamore is the dominant species with a few Oak, Hawthorn, Elder and Ash, mixed in with sapling Holly. The two areas are parts of West Common, Pimlico and an area called Redbourn Road. In the case of Redbourn Road, the greater majority of the woodland belt is privately owned by the residents of the adjacent houses.

3.10 It is essential to try to control the spread of the disease and, in order to do so, remove the source of more spores. Regardless of the disease, all trees with squirrel damage will eventually die and collapse, and therefore they have no long term ecological or amenity value. Where the trees are close to roads and footpaths, the dying trees present a health and safety concern. Large dead branches or entire stems or trees can fail as the wood’s tensile strength is degraded by decay.

3.11 In addition to the seriousness of the trees being diseased and dying, the rapid spread due to airborne spores, there is a slight risk to human health. The spores are highly allergenic and can cause a pneumonic disease similar to farmer’s lung. This is a relatively unlikely possibility but nonetheless recognised as a problem.
Management Strategy

4.1 The first issue is to notify the owners of the land at Redbourn Road of the problem and need for management. With their agreement, all Sycamore trees should be clearly marked up to identify them for removal. Once squirrel damaged trees and the very few undamaged trees have been identified, they should be felled and removed.

4.2 If a tree shows signs that it is already infected with Sooty Bark Disease, it should be felled, not chipped on site but removed to be burned.

4.3 All other Sycamore trees in the subject areas should be felled to ground level and arising removed from site as the pathogen can survive in dead timber or woodchip.

4.4 Following the felling and removal, any regeneration growth from the stumps must be chemically treated to kill off the root system and prevent regrowth.

4.5 Clearly this will have a dramatic visual affect in several areas where Sycamore are the predominant species. In order to address the visual, environmental and ecological issues that the felling has caused, it is important to have a planned replanting scheme in place to address all negative effects of the operation as soon as possible.

4.6 Planting trees in the next available season should be a priority, clearly with species generally considered resistant to squirrel attack. The species can include Lime, Hornbeam, Hawthorn, Birch, Poplar, Willow, Whitebeam, Apple and Rowan.

4.7 The specific planting strategy and management can be put in place once the general plan is implemented.

4.8 Whilst it may seem obvious that grey squirrel control should be undertaken, this is a complex and very difficult operation which is rarely successful due to sheer numbers, public concern and recent changes to the Wildlife and Countryside Act. At this time, I do not consider that it is a feasible option.
Prior to commencing any arboricultural work to the trees, it is essential to liaise with the Local Planning Authority they may be protected by a Tree Preservation Order or within a Conservation Area.

Trees are self-optimising mechanical structures that grow in and react to their environment. They are living organisms that live and die, and are capable of being wounded or infected by objects or other organisms. As self-optimising structures, trees will make as much economic use of materials as possible to ensure that any stresses are uniformly spread over the entire surface area. This means that even a mechanically perfect tree could be damaged or caused to fail by extreme events, such as weather, that overload specific areas (break points).

No tree can ever be guaranteed to be 100% safe and even trees in good condition can suffer damage under normal conditions. Any tree can be hazardous as a result of decay or structural weakness, but the risk posed by that hazard is determined by its size and location in relation to the potential target. Frequent inspections can help to identify potential problems before they become acute and allow for intervention to mitigate against a risk posed by hazard.

All wild birds, their young, eggs and active nests are protected under law and it is an offence to damage a nest intentionally while it is in use or being built. Non-urgent tree work or hedge cutting should not be undertaken during the bird nesting or breeding season (March to July, but depending on seasonal temperatures, some birds continue breeding into August and September).

All bats and their roosts are strictly protected under the Wildlife and Countryside Act 1981 and the Natural Habitats and Conservation of Habitats and Species Regulations 2010. Where bats are suspected to be present, seek advice from a licensed bat specialist before carrying out any major tree work or hedge cutting.

Should you have any questions or require any clarification, please do not hesitate to contact me.

Yours sincerely

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