



ON THE JOB SITE

Treescape Tree Care Professionals prop a 200 year-old maple tree on The Briars Resort this past December.

Here's a service that most arborists may undertake only very rarely, if at all, during their careers, and yet one that may be going through something of a renaissance. Many arborists tend to think of propping as both unnecessary and a somewhat ineffective long-term solution. Surely we can prune to moderate defects and perhaps install a cable or brace to add some supplementary support? There are many reasons we might consider propping as an alternative to preserve an important tree. In this enlightened age of forest conservation and awareness of the value and significance of our heritage trees, preservation of old and relatively intact specimens is possible without the physiological shock of reduction pruning. Indeed, as a natural process of retrenchment, many older trees are likely to have lost their tops and often provide us with little opportunity to install cables. Turn the page to read the details of a recent propping job we undertook in December.



Top: The most likely scenario for this 200 year-old maple – the tree falls splits in half.
Above: Cradle in situ on tripod support.



Treescape Certified Arborists out of Ennismore recently undertook just such a task with one of our prestigious clients, The Briars Resort on Lake Simcoe. The tree in question, a magnificent sugar maple within the north parking lot, is reckoned to be around 200 years-old. General manager Hugh Sibbald and his family have a strong attachment to the tree and it is known and greatly admired by the local community and visitors alike. The tree has “endured” many well-intentioned interventions over its lifetime, including cavity filling with cement and bolting in the ‘50s and being tapped for syrup for numerous years. The tree has even been sung to and hugged by an unnamed arborist in the ‘70s!

What we had to work with was basically a three-stemmed tree, where the

centre stem had died leaving two heavily weighted stems on either side of a decayed main trunk. The tree literally wanted to fall in half and if it were to be retained at anything similar to its present grandeur, would need some form of support.

A precursor when considering any form of supplementary support should be a tree risk assessment. The soon-to-be revealed *ISA Tree Risk Assessment* qualification, *ANSI A300 Part 9* and the *ISA Best Management Practice (BMP) on Tree Risk Assessment* provide excellent guiding principles. One of our first considerations was: Can we move the “target?” The tree was willingly granted exclusive use of its rooting zone to the drip line, but immediately adjacent to that, parking was still required. With such heavily weighted



Adjacent: Concrete filling probably once seemed like a good idea! **Above:** A mature Austrian pine branch we also supported on the property.

stems that could potentially fall into areas beyond the drip line, other measures to reduce the risk of harm were called for.

ANSI A300 Part 3 and the *ISA Best Management Practice on Tree Support Systems* give guidance on the four main forms of supplementary support – cabling, bracing, guying and propping. With the decision made to install props, the business of design and installation could begin. Measurements were taken to include vertical heights, branch angles and circumferences. Props were then fabricated to be sufficient to support the expected load from our branch weight calculations. Some weight guidance is given in the ANSI and BMP literature and readers might also want to look at “A relationship between circumference and weight in trees and its bearing on branching angles” (Murray, Cecil D., *Journal of General Physiology*, May 1927, pp. 725-729).

The most effective support for this tree prescribed the use of three props – two single poles and one tripod for the heavier, east side of the tree. Critical to the design was a means of securing the branch to the prop to prevent it from falling off. This



called for the fabrication of cradles with adjustable securing straps for each prop, custom built for branch circumference at the point of support.

As with the fabrication of any support system applied to a dynamic body, adjustment is critical – both for installation and subsequent maintenance. Adjustment for the single pole props was provided by threaded rod into captive nuts at the top ends of the support poles, swivelling links on the “feet” of the props, and, for the tri-

diameter pads with a spike to secure it in position and further anchored with three pins in each pad.

We advocate the use of a bucket truck – it’s pretty much essential for this type of operation – and at least one climber for manoeuvrability and positioning the hardware correctly.

Although the props were assembled and checked in the shop, you guessed it, it wasn’t quite as easy on the job site. Our lesson learned was always to provide as much and



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pod, turnbuckle adjustment of steel cables between each leg to effectively lower or raise the whole assembly in situ. The sheer weight of each leg of the tripod assembly required that they were fabricated and assembled in two sections.

Some debate ensued about setting the support “feet” in the ground. Does a tree raise and lower with frost? After all, most of the roots are in the top four feet of soil. Nevertheless, it was decided to set the foot of each prop or leg in the ground on large

as many points of adjustment as possible – even if you think you won’t need them!

Finally, remember to advise your clients that there are no guarantees with propping. Look upon it, as the literature says, for supplementary support only and do stress the requirement of periodic adjustment and maintenance. Lastly, for all those sceptics amongst us who feel this is only a temporary postponement of the inevitable, there is another early-mature sugar maple under the canopy of the tree, thought to be a seed-

Top of page left: Tripod prop on the tree with cable connections between the legs. **Top right:** Getting ready to start work. **Above top:** The maple fully leafed out in summer. **Above:** The foot of each leg has a circular anchored pad.

ling of the parent sugar maple itself. The genetic code of this grand old veteran will survive even when its time finally comes, but in the meantime, it remains intact to give us many more years of wonder and delight. ☺

— submitted by Paul Hambidge, Treescape Tree Care Professionals, Ennismore