

ISA Tree Risk Assessment form

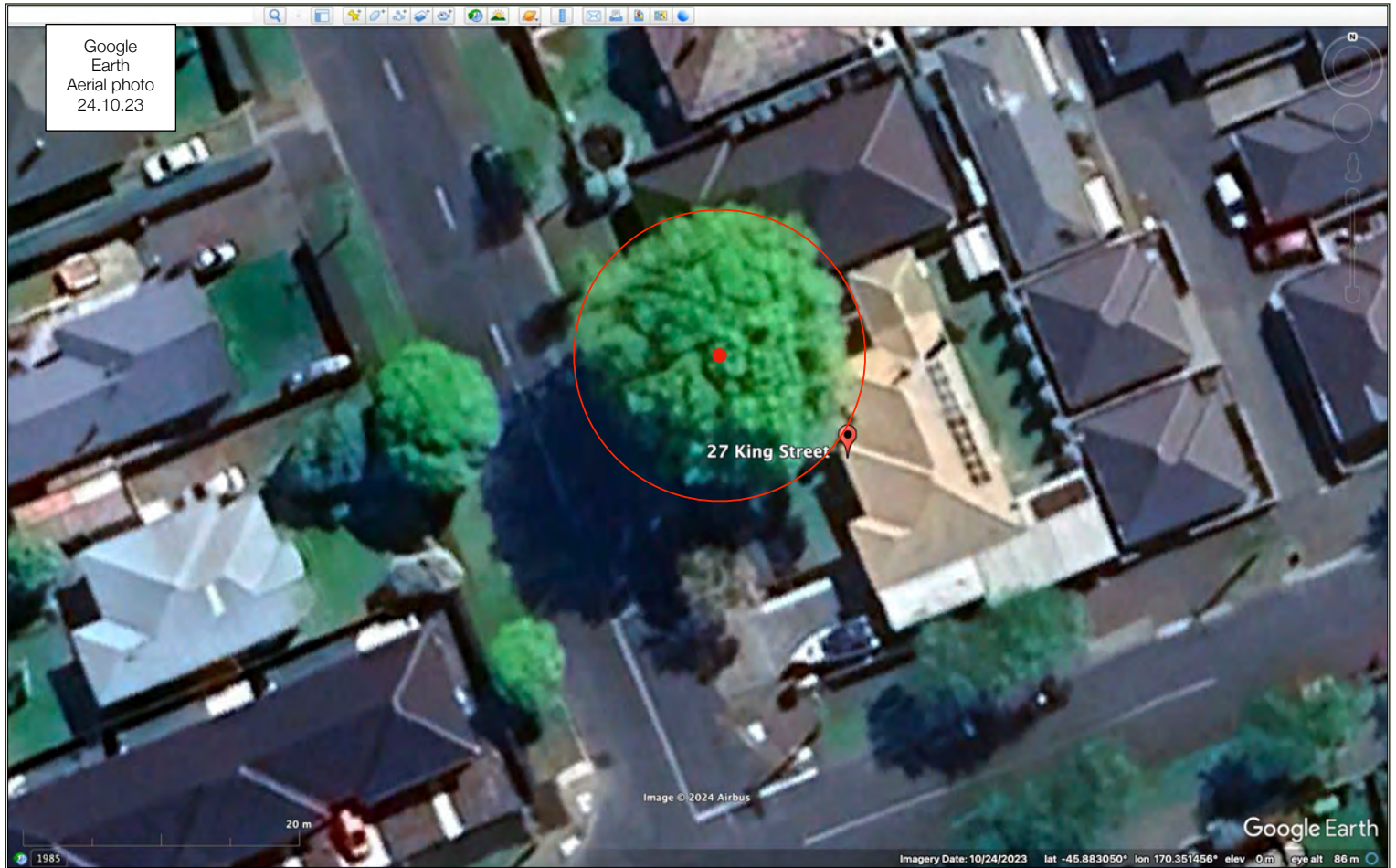
Date: 27.04.24

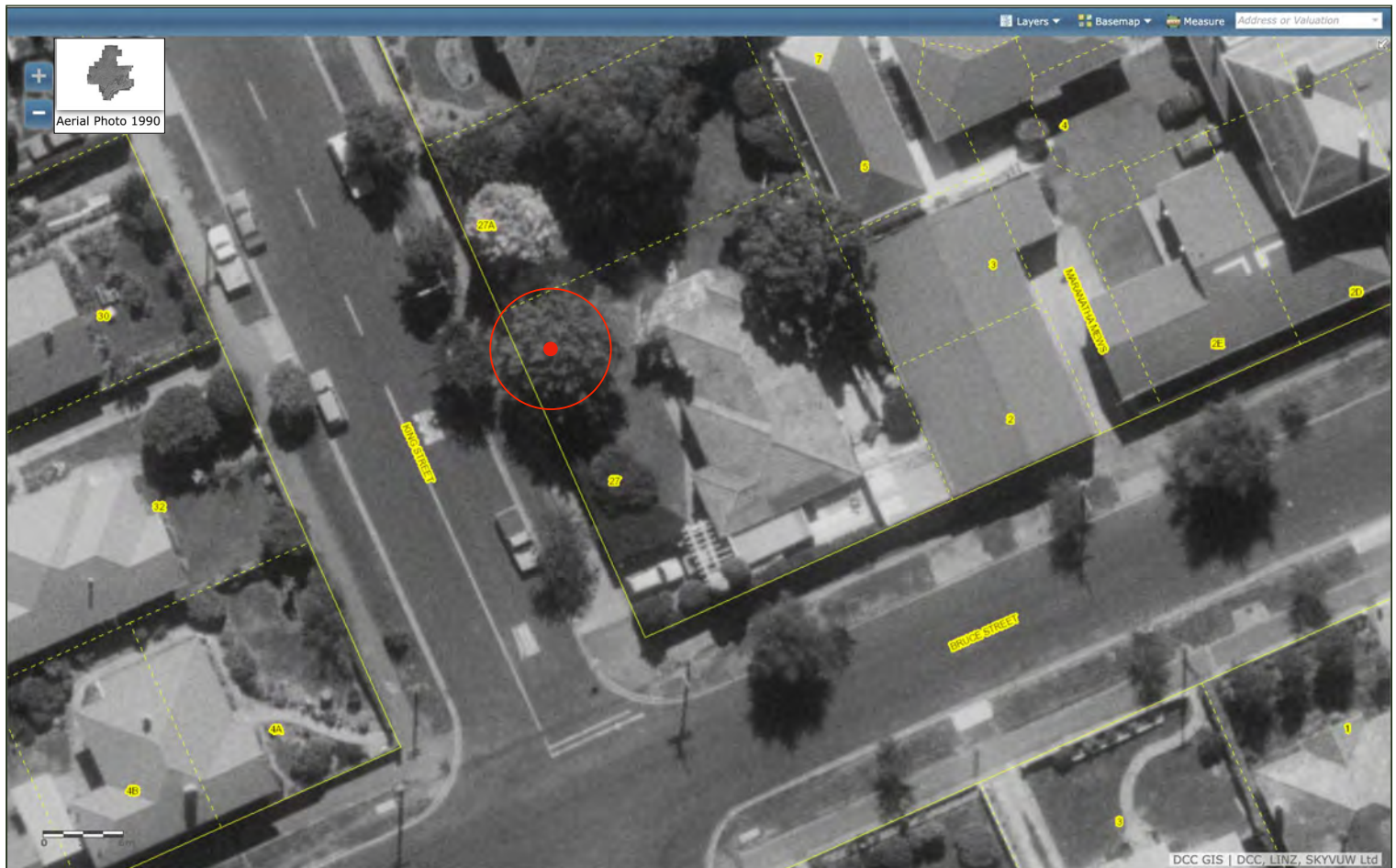
Peter Waymouth - ISA Board Certified Master Arborist

NZ-0039BTM

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2 Property: To reduce risk of damage to house /electrical network a strong cabling system is recommended																								Residual Risk																								Low																																																																																																																																																																																															
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International Society of Arboriculture takes no responsibility for conclusions/recommendations drawn from use of this form. Adapted by Peter Waymouth ISA Board Certified Master Arborist (NZ - 0039BTM) from a data sheet produced for ISA Tree Risk Assessment Qualified (TRAQ) Arborists in 2018 greentrees 04.02.22 ©





Quercus palustris Muenchh

Quercus palustris Muenchh.

Pin Oak

Fagaceae -- Beech family

Robert A. McQuilkin

Pin oak (*Quercus palustris*), also called swamp oak, water oak, and swamp Spanish oak, is a fast-growing, moderately large tree found on bottom lands or moist uplands, often on poorly drained clay soils. Best development is in the Ohio Valley.

The wood is hard and heavy and is used in general construction and for firewood. Pin oak transplants well and is tolerant of the many stresses of the urban environment, so has become a favored tree for streets and landscapes.

Habitat

Native Range

Pin oak grows from southwestern New England west to extreme southern Ontario, southern Michigan, northern Illinois, and Iowa; south to Missouri, eastern Kansas, and northeastern Oklahoma; then east to central Arkansas, Tennessee, central North Carolina, and Virginia (16).

Quercus palustris

"Pin oak" redirects here. For the community, see [Pin Oak, West Virginia](#).

Quercus palustris, also called **pin oak**,^[4] **swamp oak**, or **Spanish oak**,^[5] is a tree in the [red oak](#) section (*Quercus* sect. *Lobatae*) of the genus [Quercus](#). Pin oak is one of the most commonly used landscaping oaks in its native range due to its ease of transplant, relatively fast growth, and pollution tolerance.^[6]

Description

Quercus palustris is a medium-sized [deciduous](#) tree growing to 18–22 metres (59–72 feet) tall, with a trunk up to 1 m (3½ ft) in diameter. It has an 8–14 m (26–46 ft) spread. A 10-year-old tree grown in full sun will be about 8 m (26 ft) tall. Young trees have a straight, columnar trunk with smooth bark and a pyramidal canopy.

By the time the tree is 40 years old, it develops more rough [bark](#) with a loose, spreading canopy. This canopy is considered one of the most distinctive features of the pin oak: the upper branches point upwards, the middle branches are at right angles to the trunk, and the lower branches droop downwards.^{[6][7]}

The [leaves](#) are 5–16 centimetres (2–6¼ inches) long and 5–12 cm (2–4¾ in) broad, lobed, with five or seven lobes. Each lobe has five to seven bristle-tipped teeth. The [sinuses](#) are typically U-shaped and extremely deep cut. In fact, roughly the same amount of sinus area exists as actual leaf area. The leaf is mostly hairless, except for a very characteristic tuft of pale orange-brown down on the lower surface where each lobe vein joins the central vein. Overall autumn leaf coloration is generally bronze, though individual leaves may be red for a time, and is not considered particularly distinctive.^[8] The [acorns](#), borne in a shallow, thin cap, are hemispherical,

10–16 millimetres (13/32–5/8 in) long and 9–15 mm (11/32–19/32 in) broad, green maturing pale brown about 18 months after [pollination](#).^[7] Unless processed using traditional methods, the acorn is unpalatable because the kernel is very bitter.^[citation needed]

In its natural environment pin oak is a relatively short-lived, fast-growing pioneer or riparian species with a lifespan of approximately 120 years against many oaks which can live several centuries. Despite this there are many examples of pin oak that exceed this lifespan.^[9] It develops a shallow, fibrous [root](#) system, unlike many [oaks](#), which have a strong, deep taproot when young.^[6]

A characteristic shared by a few other oak species, and also some beeches and hornbeams, is the retention of leaves through the winter on juvenile trees, a natural phenomenon referred to as [marcescence](#). Young trees under 6 m (20 ft) are often covered with leaves year-round, though the leaves die in the fall, remaining attached to the shoots until the new leaves appear in the spring. As with many other oak species, dead pin oak branches stay on the tree for many years.^{[6][7]}

Flowering and fruiting

Like all oaks, flowering and leaf-out occur in late spring when all frost danger has passed. The flowers are monoecious catkins which, being self-incompatible, require the presence of another oak for pollination. Any species in the red oak group can serve as a pollinator, but in pin oak's natural range, this will usually be [northern red oak](#) or [scarlet oak](#). Interspecies hybridization occurs freely. The acorns require two growing seasons to develop.^[7]

- Bark

STEM assessment April 2024 shows Pin Oak (*Q. palustris*) to be a common tree in Mosgiel.

Recent aerial photo courtesy of AppleMaps shows Pin Oak street tree planting of ≤ 25 semi-mature trees in Hagart-Alexander Drive





Pin Oak (T666) 27 King St, Mosgiel_Indicative design for a dynamic cable system to mitigate branch failure over electricity street cables & house looking to sou'west _photo July 2020
Indicative pruning outline shown for 10% crown reduction on 4yr cycle greentrees 29.04.24



Pin Oak (T666) 27 King St, Mosgiel_Indicative design for a dynamic cable system to mitigate branch failure over electricity street cables & house looking to nor'west _photo August 2020
Indicative pruning outline shown for 10% crown reduction 4yr cycle greentrees 29.04.24

