Camden Residents' Action Group

Incorporated

Camden – Still a Country Town

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General Manager and Council
Camden Council
John Street,
Camden 2570
27 July 2016

Dear General Manager and Council,

URGENT REQUEST FOR MEETING
Argyle St works and health of Jacaranda and other street trees

Residents raised concerns in 2014 about the potential loss of jacarandas in Argyle Street.[1] Council placed a full page notice in the local paper saying: "*Council loves the Jacarandas too*."

The Mayor said Camden Council was committed to ensuring the care of jacaranda trees still in the main street and acknowledged that "*While on the median strip their root base was quite restricted, which affected their growth*".[2] We were promised by Council in its brochures (see extracts in Appendix) that the works would not change the width of the median strip and that the number of jacaranda trees would remain the same.

[1] Tarik Elmerhebe (27 September 2014) *Camden residents have raised concerns about the potential loss of some jacaranda trees on Argyle St* Macarthur Chronicle http://www.dailytelegraph.com.au/newslocal/macarthur/camden-residents-have-raised-concerns-about-the-potential-loss-of-some-jacaranda-trees-on-argyle-st/news-story/0439940a91bfdadb6e5972635954589b

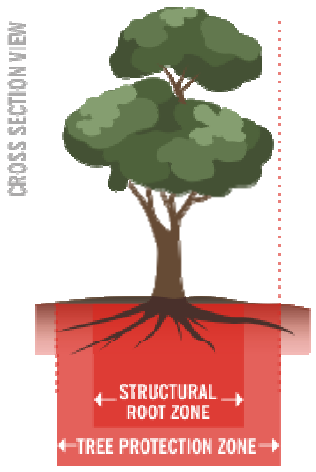
[2] Jess Layt 29 Apr 2016 *Jacarandas thriving in new home* Camden Advertiser http://www.camdenadvertiser.com.au/story/3879152/jacarandas-thriving-in-new-home/

However it appears that the median strip is being narrowed by the works, which logically causes distress to the trees. All trees are sensitive to root disturbance with the effects being potentially devastating, sometimes taking five to ten years to become fully visible.

Given the sensitivity of this matter it has been assumed that Council would follow best practice as set out in the Australian Standard (4970-2009) for the protection of trees on development sites. This standard states that roots are far more extensive and closer to the surface than commonly thought, with root damage the main cause of tree damage on construction sites by

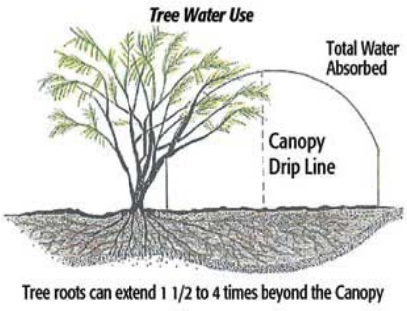
- being removed
- being mechanically wounded
- being compacted by machinery
- soil build-up
- laying of pavements
- chemical contamination by solvents, fuel, cement waste etc
- changes in air levels through changes in drainage patterns
- changes in available water.

Understanding the structure of a tree's root system[3] should inform any works undertaken near them. Roots are vitally important to the health of trees as they are responsible for nutrient and water uptake, store energy, and anchor the plant. They breathe oxygen from the soil through their roots and the highest oxygen content in the soil is in the top 45 cms of soil and major feeder roots of trees are usually found in the first 45 to 60 cms of soil as water, nutrients and oxygen are absorbed most readily in this range. Ninety percent of the root system is located in the first 30 to 45 cms of soil and more than half is in the top 30 cms.



Source: *Queensland Arboricultural Association*

Although many roots extend beyond the longest branches, potentially to a distance equal to two or more times the tree's height, it is commonly understood that construction works should avoid impinging on the root system within the branch drip-line, an area referred to as the Protected Root Zone (PRZ) and never impinge on the Structural Root Zone (SRZ) which is required for tree stability.



Source: *Joseph H. Fortier, Landscape Online*

[3] Joseph H. Fortier and Jerry M. Belt (2016) *Tree Irrigation: Water Where Roots Need It* http://landscapeonline.com/research/article.php/9308
Queensland Aboricultural Association (2016) *Calculations* http://qaa.net.au/resources/calculations/

The photo above shows the healthy trees and median strip of Section 1B in 2011.

The following photos show the Section 1B median strip works in 2016.

On the Westpac side of Argyle Street, the trench and concrete are too close to the trees.

There is a wide trench and concrete inside the kerb line used to facilitate a level path for the machine laying the kerb. The wide concrete is to make a level platform for the kerb making machine to travel on which is convenient for the contractors, but detrimental to the health of the trees. The contractors should be required to use a concrete saw to remove the excess width of concrete.

The contractors should also have been required to remove the excess concrete of the Stage 1A works.

As can be clearly seen in the photos below, the width of the median strip has been reduced, with the new wide strip of concrete around the Argyle Street median strip garden now significantly closer to the jacaranda trunks and covering a larger area of the root systems. One side is closer than the other as the trees were not planted in the centre of the street and the lane widths are not the same.

If there is to be encroachment into the PRZ as is apparent, the Structural Root Zone (SRZ), an area considered essential for tree stability, must not be disturbed. Australian Standard 4970-2009 indicates that a tree with a diameter of 30cms has an SRZ radius of 2 metres.

Encroachment into the SRZ is obviously demonstrated in the photos above and opposite. This raises serious questions about safety and the management of the Argyle St works.

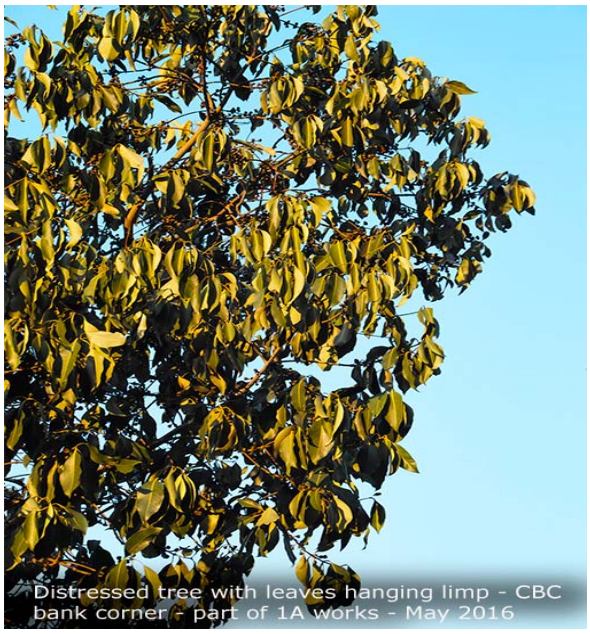
On 23 July 2016 the contractor removed the new kerb that was installed on the 18th July 2016 on the Westpac side of Argyle Street. There appears to have been a problem at the traffic lights section of the kerb installed on the 21st July. The lack of a precise planned engineering program is creating more disturbances, and no doubt cost, than necessary.

The jacaranda requires well-draining soil, and when subject to poor drainage can develop root rot. The assumption was that the concrete laid as an aid to construction so close to the root system, as amply demonstrated by the photos, would be removed.

However it was noted on 26 July 2016 that instead of the harmful concrete being removed, it is instead being covered over with soil and mulch, thereby hiding from the casual observer that the area beneath the trees is not soil containing accessible nutrients and moisture.

Further, the health of all Argyle Street trees is at risk because the works have damaged the water system. Until a water system was installed in 2008 - 2009 the trees struggled to survive and grow. Storm water pipes trenches have cut through the median strip in four places plus at the two sets of traffic lights. Instead of just two water controls there will need to be many. A considerable amount was invested in the water system, which now needs major repairs or to be replaced.

One only has to take note of how the native evergreen box trees (lophostemon conferta) trees on the corners of John and Argyle Street, which are moderately drought tolerant[4], were affected by the Stage 1A works in the short term through their primary root systems being chopped during the works and changing the area at their bases.



As is clearly demonstrated in the photos above, a third of one tree died and the leaves of another were limp and hanging straight down, not erect as they should be if all was well. Watering by Council truck was not nearly enough for them to survive. Only the heavy rain in June 2016 saved them.

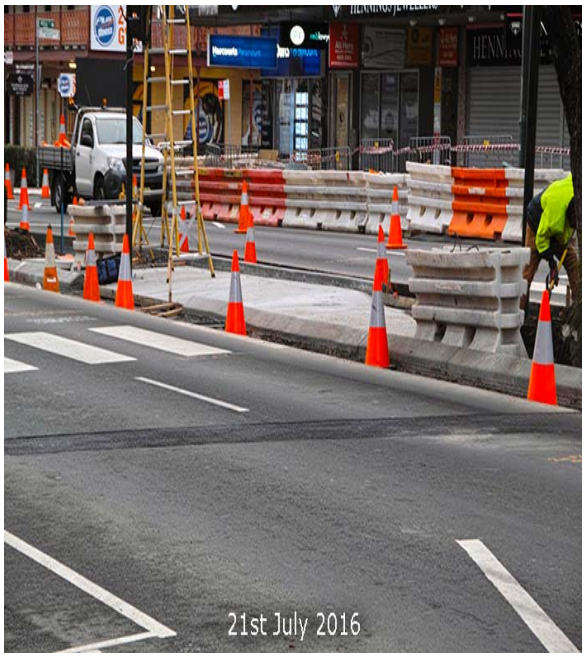
The reduction of open soil surrounds to capture water and interference with the root system of the tree at the Flight Centre corner of John and Argyle Streets during recent

[4] Marrickville Council (2014) *Marrickville Street Tree Master Plan 2014 APPENDICES* ***6.7 Street Tree Data Sheets*** https://www.marrickville.nsw.gov.au/Global/Environment/In%20your%20community/Tree%20management/Street%20Tree%20Master%20Plan/MarrickvilleSTMP_Pt6_7-AdoptSep14.pdf

Stage 1B works is yet to become evident.

It also remains to be seen how interference with the root systems, possible changes to soil pH (tolerance pH 4-6)[5] and reduction of open soil surrounds will affect the healthy survival of the box street trees over time.

As shown in the photos below, the work site is currently very active with heavy machinery and without special care roots are likely to be compacted and mechanically wounded.



Since July 2015 the works have been causing disruption and much inconvenience to businesses and customers. The works are overtime and over-budget. There is an upcoming election in September and the impression is, rightly or wrongly, that the works are being done with less than appropriate care as they are being hurried to meet political deadlines.

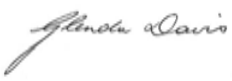
[5] Tree Logic Arboricultural Consultants (2009) *Lophostemon confertus (Queensland Brush Box)* http://treelogic.com.au/facts/queensland-brush-box/

The community has very serious concerns about the Argyle street project and needs urgent reassurance and answers.

- did Council draw up plans addressing structural soil and other preservation measures for the trees before the works began, and if so have they been implemented;
- has a certified arborist been engaged to
  - monitor the works and provide treatment to the trees as required;
  - provide an opinion on the tolerance of the jacarandas to incursions into the PRZ and SRZ;
  - provided an expert assurance that these works
    - are not using materials toxic to the roots of the trees;
    - are not exposing any trees to unsafe high pH levels such as that of concrete washout water (around 12 pH);
    - will not result in permanent damage to the trees;
    - will not result in the loss of jacarandas in the short term or the long term;
    - will not result in the loss of any other street trees in the short term or the long term;
    - will not cause any lack of tree stability by incursion into the SRZ and cause a danger to the public.
- is the water system, as a matter of urgency, to be repaired or replaced?

Answers to these questions are a matter of urgency and we request a meeting with the General Manager, interested Councillors and perhaps qualified staff as soon as possible.

Yours sincerely,



Glenda Davis

President
Camden Residents' Action Group

APPENDIX: Extracts from Council brochures (undated but from the file names believed to be in March 2015 and July 2015).

Source: **Camden Council (n.d)** ***Town centre enhancements. Another Great Camden Council Project!***
http://www.camden.nsw.gov.au/assets/Brochure-for-Camden-Show.pdf

Will the median strip remain?

- the enhancements do not include removal or modification of the median strip along Argyle St, except at Oxley St to allow vehicles to turn right out of Oxley St

Will the Jacaranda trees in the median strip be removed?

- Four existing trees will need to be removed to allow for traffic signals so we can cope with increased traffic volumes and improve pedestrian safety. Four Jacaranda Trees will be planted at other locations within the median strip on Argyle St. This means that the number of Jacaranda Trees in Argyle Street will stay the same as it is now, at 36 trees.

Source: **Camden Council (n.d)** ***Town centre enhancements***
http://www.camden.nsw.gov.au/assets/pdf/Major-Projects/2015/Camden-Town-Centre/FAQ-July-2015-Works-Commenced.pdf

Will the median strip remain?

• The enhancement works do not include removal or modification of the median strip along Argyle Street, except at Oxley Street to allow vehicles to turn right out of Oxley Street, and minor changes for the new pedestrian signals between John and Hill Streets.
• Council does not intend to place a fence within the median strip. The existing median crossing arrangements are being reviewed as part of the new traffic signal installation along with additional tree plantings, to ensure that a balance is achieved for pedestrian movements and protection of landscape.

Will the Jacaranda trees in the median strip be removed?

• Four existing Jacaranda trees will need to be removed to allow for the traffic and pedestrian signals. Four Jacaranda trees will be planted at other locations within the median strip on Argyle Street. This means that the number of Jacaranda trees in the median strip will stay the same as it is now, at 36 trees.