



Technical Services Reports

Committee Consideration – 11 September 2012


Council Resolution – 25 September 2012

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TS18.12	Request for Retrospective Approval of Nature Strip Development at 47 Esplanade, Nedlands
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Committee	11 September 2012
Council	25 September 2012

Applicant	Mrs Sarah & Mr Trefor Thomas – 47 Esplanade, Nedlands
Owner	City of Nedlands
Officer	Andrew Dickson – Manager Parks Services
Director	Andrew Melville – Acting Director Technical Services
Director Signature	
File ref.	ES1/47, M12/10245, D12/10950
Previous Item No's	Item 12.4 Report CP31.12 – Council Meeting – 24 July 2012
Disclosure of Interest	No officer involved in the preparation of this report had any interest which required it to be declared in accordance with the provisions of the <i>Local Government Act (1995)</i> .

Purpose

To present for Council's consideration a request received from the owner of 47 Esplanade, Nedlands for retrospective approval of the adjacent nature strip development without modification.

Recommendation to Committee:

Council approves the request for retrospective approval of the nature strip development adjacent to 47 Esplanade, Nedlands subject to the following conditions being completed within 28 days ensuring compliance with the City of Nedlands Nature Strip Development policy:

- a. the various components of the nature strip development are to be modified so that artificial grass does not comprise more than 40% and garden beds and/or other natural elements comprises a minimum of 20% of the total nature strip area;
- b. drainage is installed to the artificial grass sub base, as approved by Administration, to ensure that all storm water is retained within the nature strip area;
- c. The City is indemnified by the owner of 47 Esplanade, Nedlands against all claims arising out of, or in connection with the nature strip development.

Strategic Plan

KFA 3: Built Environment

3.7 Provide efficient and integrated approvals systems.

KFA 5: Governance

5.9 Identify, manage and seek to minimise risk.

Background

Council adopted the current Nature Strip Development policy on 24 July 2012. The policy contains a provision relating to the installation of artificial grass conditional to certain requirements. In accordance with the policy, where artificial grass installation is incorporated in a nature strip development, there is a requirement to make satisfactory arrangements for drainage and to ensure it does not comprise more than 40% of the total nature strip area.

It is a requirement of the Nature Strip Development policy and the Local Laws relating to Thoroughfares that owners apply for a permit prior to commencing certain works, including installing artificial grass, within a public Thoroughfare.

Without applying for a permit, artificial grass was installed as part of a nature strip development at 47 Esplanade, Nedlands between 1 February 2012 and 30 March 2012. The development does not conform to the current Nature Strip Development policy in that nature strip comprises approximately 56% artificial grass and 16% natural garden bed. In addition, there has been no consideration for drainage of the sub base during installation.

Administration wrote to the owner of 47 Esplanade informing them that the nature strip development did not conform to Council's requirements, that it had been installed unlawfully and to contact the City within 14 days to discuss the matter.

The owners contacted the City and subsequently submitted a nature strip development application. The City approved the application conditional to them reducing the percentage of artificial grass, installing drainage and indemnifying Council. The owners wrote to the City objecting to the conditions and asking that they be granted retrospective approval without modification. They requested the matter be referred to Council for a decision on their objection to the imposed conditions.

Key Relevant Previous Decisions

Item 12.4 Report CP31.12 – Council Meeting – 24 July 2012

Council Resolution:

Nature Strip Development, subject to adding the words "with reference to obligation of builders and contractors not to interfere or damage Street Trees" under the heading Verge use in front of "Building Construction"

Proposal Detail

The owner of 47 Esplanade, Nedlands proposes to retain the adjacent nature strip development without modification. They have advised that they object to the conditions imposed by Administration allowing retrospective approval and wish to have Council exercise its discretion to issue retrospective approval.

Consultation

Required by legislation: Yes No

Required by City of Nedlands policy: Yes No

Consultation type: Direct ongoing consultation with property owner and other parties involved.

Legislation

- *Local Government Act 1995*
- *Local Laws Relating to Thoroughfares*
- Nature strip Development Policy
- Drainage of Private Properties Policy

Budget/financial implications

Budget:

Within current approved budget: Yes No

Requires further budget consideration: Yes No

Financial:

There may be a cost to the City if compliance action requires the City to remove part of the artificial turf to ensure compliance with Council policy; however the associated cost would not be significant and would be recoverable.

Risk Management

Risk Category	Risk Rating Prior to Controls	Risk Rating After Controls
Health	Low	Low
Financial	Moderate: The City is liable for any claims for damages arising out of the installation of a nature strip development as this is public land under the care and control of the City.	Low: In order to obtain a permit to install artificial grass on a nature strip, property owners are required to indemnify Council from any possible litigation arising out of, or in connection to, its installation as part of a nature strip development.
Reputation	Moderate: There is a possibility that any action taken by Council may receive some coverage by local media (i.e. Post Newspaper).	Moderate
Service Interruption	Low	Low
Environment	Moderate: There is some scope for issues around storm water management and adverse affects to the environment. There is scientific evidence pointing to a reduction in localised temperature regulation resulting from artificial grass being used as a substitute for natural grass or gardens.	Low: Drainage and associated storm water management issues are addressed within the requirements set out by policy.
Regulatory	High: The Thoroughfares Local Law clearly defines the procedure and allowable uses for private development on public lands. Where the local laws are openly disregarded it gives rise to heightened levels of risk to Council and the City.	Low: This is dependent upon Council upholding its regulatory function with respect to controlling private development within public thoroughfares.

Discussion

The City became aware of the unlawful nature strip development at 47 Esplanade, Nedlands on 29 March 2012. On contacting the owner of the property a City officer was able to confirm that the company responsible for carrying out the installation of the development was

Astro Synthetic Turf Pty Ltd. Pursuant to the Local Law Relating to Thoroughfares, Astro Synthetic Turf Pty Ltd was previously prosecuted successfully by the City for a similar offence at 26 Genesta Crescent, Dalkeith.

The nature strip development currently comprises the approximate percentages of surface types (refer - Figure 1):

- 28% hardstand (crossover);
- 16% garden bed; and
- 56% artificial grass.

In examining retrospective approval for the nature strip development, consideration needs to be given in context of the events prior to completion of the works, the requirements of Council's Nature Strip Development policy and the requirements of the Local Law Relating to Thoroughfares.

In particular, consideration should be given in respect of drainage requirements and any knowledge the company that installed the development had of the requirement for obtaining a permit prior to commencing works.

In considering drainage requirements, the following points should be noted:

- the nature strip area is near to level;
- the sub base consists of 'cracker dust', or similar product, that has been compacted and would not provide a suitably permeable layer for drainage purposes; and
- an evaluation of the nature strip area drainage characteristics has determined that during a significant rainfall event, there is the potential for storm water to be discharged into the road drainage system.



Figure 1 - Nature strip development at 47 Esplanade, Nedlands

In considering the requirements of the Nature strip Development policy, the following points should be noted:

- the completed works do not conform to Council requirements; and
- Council has not been indemnified against all claims arising out of, or in connection to, the installation of artificial grass on a public Thoroughfare.

In considering the requirements of the Local Laws Relating to Thoroughfares, the following points should be noted:

- a permit had not been sought or issued prior to commencement of the works.

In considering any knowledge the company had of the requirement for obtaining a permit prior to commencing works, it should be noted that:

- the company has previously been convicted of the same offence, in relation to 26 Genesta Crescent - Dalkeith, in the Perth Magistrates Court pursuant to clause 7(1)(e)(ii) of the Local Laws Relating to thoroughfares.

Conclusion

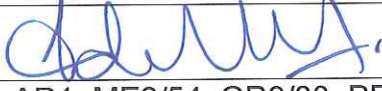
The application for retrospective approval does not comply with Council policy although can be made to do so. The City could not approve this development without modification as has been requested by the applicant. The City's recommendation to Council reflects current Council policy.

Attachments

Nil

TS19.12	Requests for Street Tree Removals Referred for Council Consideration
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Committee	11 September 2012
Council	25 September 2012

Applicant	City of Nedlands
Owner	City of Nedlands
Officer	Andrew Dickson – Manager Parks Services
Director	Andrew Melville – A/Director Technical Services
Director Signature	
File ref.	AR1, ME2/54, GR9/80, PRS/117
Previous Item No's	Item 12.4 report CP31.12 - Council Minutes - 24 July 2012
Disclosure of Interest	No officer involved in the preparation of this report had any interest which required it to be declared in accordance with the provisions of the <i>Local Government Act (1995)</i> .

Purpose

To present to Council, requests for street tree removals that cannot be approved or refused by Administration under delegation with reference to Council's Street Trees Policy.

Recommendation to Committee

Council:

1. approve the request for the removal of the Hills Weeping Fig (*Ficus microcarpa var hillii*) street tree adjacent to 80 Grovedale Street, Floreat subject to replacement by a suitable species;
2. approve the request for the removal of two (2) Hills Weeping Fig (*Ficus microcarpa var hillii*) street trees adjacent to 54 Melvista Avenue, Dalkeith subject to replacement by a suitable species; and
3. refuse the request for removal of the Jacaranda (*Jacaranda mimosifolia*) street tree adjacent to 31 Bulimba Road (Barcoo Ave nature strip), Nedlands on the grounds of leaf fall; alternatively Council may, in accordance with current policy, consider approval subject to the owner consenting to:
 - a. compensating the City \$1732.00 being the amenity value of the tree as determined by the City's tree audit; and

- b. covering 100% of the cost for the City to remove the tree and plant a replacement tree of an appropriate size and species at a suitable location on the same nature strip;**

Strategic Plan

KFA 2: Natural Environment

- 2.3 Promote, maintain and protect existing plant diversity (both native and introduced) in the City.

Background

Council's Street Tree Policy allows for the removal of street trees in certain specific circumstances. All requests for street tree removal are considered by Administration in accordance with the Policy.

Where requests for street tree removal are declined, residents sometimes pursue their options beyond Administration by contacting elected members. These requests are often referred back to Administration to determine if there are reasonable grounds for consideration by Council.

Key Relevant Previous Decisions:

Council Minutes 24 July 2012 – item 12.4 report CP31.12

Council approves the revised Street Trees Policy

Proposal Detail

This report has been developed to allow Council to consider requests for street tree removal. Included are the resident's concerns and Administration's comments as per the intent of the Council Street Tree Policy. The report incorporates discussion points including the nature of the request, the merits of the request, a recommendation from Administration and explanations with regard to Administration's recommendation to Council.

Consultation

Required by legislation: Yes No

Required by City of Nedlands policy: Yes No

Consultation type:

Direct consultation between residents, Administration and Council.

Dates: Ongoing

Legislation

- *Local Government Act 1995*
- *Local Law Thoroughfares*
- Council Policy – Street Trees
- Council Policy – Nature Strip Development

Budget/financial implications

Budget:

Within current approved budget: Yes No

Requires further budget consideration: Yes No

Financial:

The City has an annual operational budget allocation for the management of street trees in accordance with policy and statutory requirements.

Risk Management

Recommendations from Administration take into account the applicable standards, statutory requirements, common law and Quantified Tree Risk Assessment principles with regards to the management of trees within public land.

Discussion

1. 80 Grovedale Street, Floreat – Approve request to remove.

The City has received requests from the owners of 80 Grovedale Street to remove the Ficus street tree adjacent to the front of their property as it is damaging their fence and reticulation. In the latest written request, and on advice from their arborist, the property owner has asked the City confirm in writing that, in the event removal is refused, when damage is caused in the future by this tree's roots the cost to repair plumbing and the house pad will be covered by Council.

The City engaged a competent and suitably qualified arborist to report on the size, potential for further growth, suitability to the location and management options for this tree. The consultant's assessment and recommendation is included below:

- Root plate damage is evident here to the extent that future stability issues can be anticipated due to a combination of factors that have occurred as a result of past road and estate development.

They are:

- Severed roots and reduced growing media in insufficient quality and size to support the species.
- Predictable decay and degradation of the basal areas.
- Vulnerability to root plate failure from prevailing weather where the majority of root severance has occurred.
- Future predictable effects on an adjacent house due to proximity and growth habit of the tree.

Consider removing this tree.

On advice from its consultant arborist, Administration recommends the removal of this tree due to the potential future impacts and the absence of suitable arboricultural techniques to address these.

2. 54 Melvista Avenue, Dalkeith – Approve request to remove.

The City has received a request from the owner of 54 Melvista Avenue to remove the two (2) Ficus street trees adjacent to the front of their property. The owner has recently completed renovation of their front boundary wall and crossover. Having renovated the crossover as a result of damage caused by another Ficus on the nature strip, that required removal, they are concerned about further potential damage to their property as the trees mature.

The City engaged a competent and suitably qualified arborist to report on the size, potential for further growth, suitability to the location and management options for these trees. The consultant's recommendations are included below:

- Consider crown reduction as an inclusion to bi annual maintenance. This should be in the form of techniques that control excess height either by targeted pruning / removal of dominant growth to produce a reduce crown mimicking natural symmetry or maintaining previous pollarded height.
- Consider also the inclusion of a root barrier and its maintenance between the trees and the newly constructed wall as well as kerb line.
- Carry out additional pruning to clear boundary line if this is of concern to ratepayer.
- Clear and expose for visual access, a non-trafficable telecommunication access lid at base of trees.

On further investigation of the consultant arborist's recommendations Administration can advise the following:

- It has been determined that the ongoing cost in carrying out crown reduction (as recommended) for the life of this tree will be a

significant investment for the City and excessive in comparison to the average street tree within the City.

- There is a weight of evidence that root barriers are not an effective long term solution in the management of Ficus tree roots. The cost to install and maintain a root barrier as recommended would be a significant investment. Administration does not feel it could justify this expense given there is a limited chance a root barrier will successfully achieve the desired outcome.
- Furthermore, the option of installing a root barrier to the kerb line is not a realistic option given the amount of root disturbance to the root plate that would be required in installing this. This being the case the cost in repairing the road surface and kerb in this location would be substantial over the life of the tree.

Administration recommends the removal of these trees due to the potential future impacts and the absence of realistic and cost effective arboricultural techniques to address these.

3. 31 Bulimba Road, Nedlands (Barcoo Ave nature strip) – Refuse request to remove on the grounds of leaf fall; consider the merits of replacement subject to owner bearing all associated costs and compensating the City.

The City has received a written request from the owner of 31 Bulimba Road to remove a Jacaranda street tree on the nature strip in Barcoo Avenue. They have asked that it be replaced with an Almond tree to the west and a Liquid Amber to the east. They have asked that this be done at Council's cost.

The tree is located on the common alignment within the nature strip (refer to Figure 1). The tree has little to no encroachment upon the boundary of the property (refer to Figure 2). For leaves to enter the pool it would require a moderate breeze from a north-east to north-west direction. This wind direction is not considered a prevailing wind in the Perth region during late autumn and early winter when leaf drop would be most prevalent.

The owner has requested removal on the basis the tree is causing damage to their property. They have stated the following:

“Over the 3 months of winter it sheds its leaves and fronds that get blown into my swimming pool. Many of the fronds get through two filters and block up the pump.”

“Clearing the pool pump is a major time consuming undertaking and is also a safety issue as the pump and attached motor are quite heavy to move to a location where they can be separated and the rotors cleaned.”

Administration refused the request in accordance with Council's Street Tree Policy which states “Leaf, flower, nut or bark fall, protection or

enhancement of views or reduction or eradication of shade shall not constitute a reason for street tree removal.”

In accordance with current policy, Council may decide to consider approving the request if the owner consents to bearing all costs related to removing and replacing the tree with an appropriately sized and species of tree; in addition to compensating the amenity value as determined by the City’s 2012 tree audit.

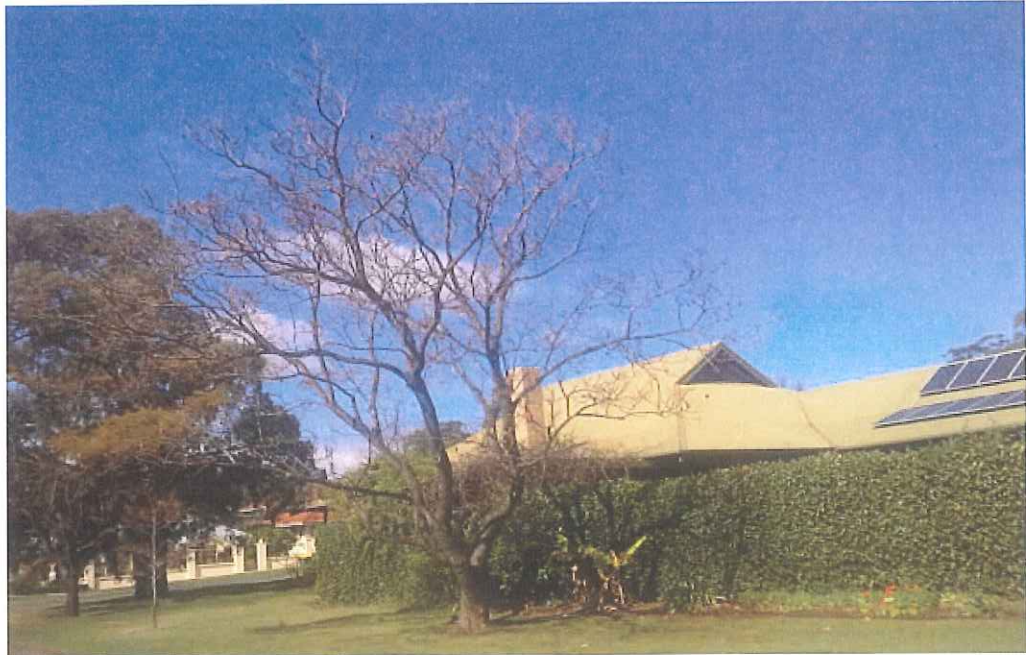


Figure 1 – Location of Jacaranda on Barcoo Avenue nature strip.



Figure 2 – Aerial photo showing extent of encroachment over property boundary.

Conclusion

It is recommended that Council approve or refuse the requested street tree removals in line with Administrations recommendations.

Attachments

1. Tree Surgeons of WA - Arboricultural Report for Street Trees adjacent to 80 Grovedale Road, 54 Melvista Avenue and 7 Archdeacon Street.

EXCELSIOR ARBORICULTURE PTY LTD trading as
TREE SURGEONS OF WA
QUALIFIED TREE SURGEONS
ABN 51 094 938 502 / ACN 094 938 502
Member of the Tree Guild of WA 8814



Postal Address: PO Box 19 RIVERTON WA 6148
Telephone: (08) 9434 5655
Mobile: 0418 943 086
Facsimile: 9434 5688
Email: jeff@treesurgeonswa.com.au

Attention: Chris Batchem.
Parks & Reserves Department
City of Nedlands.

Visual Tree Assessments
12-08-2012

Good morning Chris

Thank you for the opportunity to look at the trees located at 54 Melvista Avenue, 7 Archdeacon Street and 80 Grovedale Road.

In accordance with your instructions I have visited each location to assess the following criteria.

- Species identification
- Health and vigor.
- Defects
- Size and suitability to location.
- Management solutions.

Species identification

The trees located at the three locations selected for assessment are described as *Ficus microcarpa* var *hillii* (Hills Weeping fig). A native of northern Queensland, described typically a medium to large sized tree with a height ranging to twenty to twenty five metres with a canopy width of around fifteen to twenty metres and roots systems that extend well beyond canopy lines, sometimes double the canopy spread.

They are a superb shade plant with a dense canopy well suited to parks or reserves.

They are used extensively in some states as street trees, however where planting areas are constrained in the form of road reserves or medians, they can present problems associated with maintenance and repair of paths, roads curbing and other structures that share the confines of these areas including below ground utilities.

The root systems of all *Ficus* species spread well in excess of the confines of a trees drip line and they are sometimes the cause of damage to walls and drainage.

As streetscape specimens, they tolerate a wide climatic range as well as fairly tough environmental conditions that some road reserve facilities dictate including heavy regular pruning to accommodate overhead utilities and other infrastructure. The root plates are often damaged in trees confined to these areas leaving them prone to disease and decay as well as root plate failure in the event that they grow to near full size and in situations where these root plate are compromised.

The trees targeted for assessment in this report and at the time of inspection, were found to be in fair to good health overall with natural canopy structures largely intact except where lopping had occurred to accommodate power lines in the past or un authorized pruning had occurred i.e. (Melvista Avenue)

Other signs of pruning to accommodate trafficable clearances as well as private boundary clearance issues were also observed. Please find enclosed a brief description & observations of tree condition as well as remedial suggestions for each location as follows along with photographic illustrations.

Item 1 80 Grovedale road

There are limited opportunities for this tree to develop to mature size without impacting the surrounding infrastructure and ultimately damaging it.

There are signs that root development may be starting to cause fracturing in a partition wall at the side of the house located at this address and there may also be some involvement with footings at the front of the property.

These are early indications that are not entirely definitive at this time and may require further investigation by an engineer or builder.

However, trees size and known potential dimensions, along with the root plate structure of this species, serves as point for close consideration particularly at this location.

It would certainly be reasonable to expect more obvious signs as or of the tree grows to mature size.



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The road reserve area on the southern side of the tree contains the bulk of the basal zone & root plate which has sustained damage by mechanical means on the upper surfaces. Some of the roots have been reduced to contain them within the curb line and also facilitate past construction of an intersecting road.

It is difficult to determine the extent of root loss here without excavation of the area which would be both expensive and impractical at this time.

It would be reasonable however, to conclude that the long term viability of this plant has been affected by environmental factors that can be said to have been mechanically induced by road and estate construction.

Recovery of a root plate of sufficient size to maintain the mature dimensions of this tree species is unlikely, due to damage and inevitable decay that can be expected to develop in important and essential components of the root plate structure.

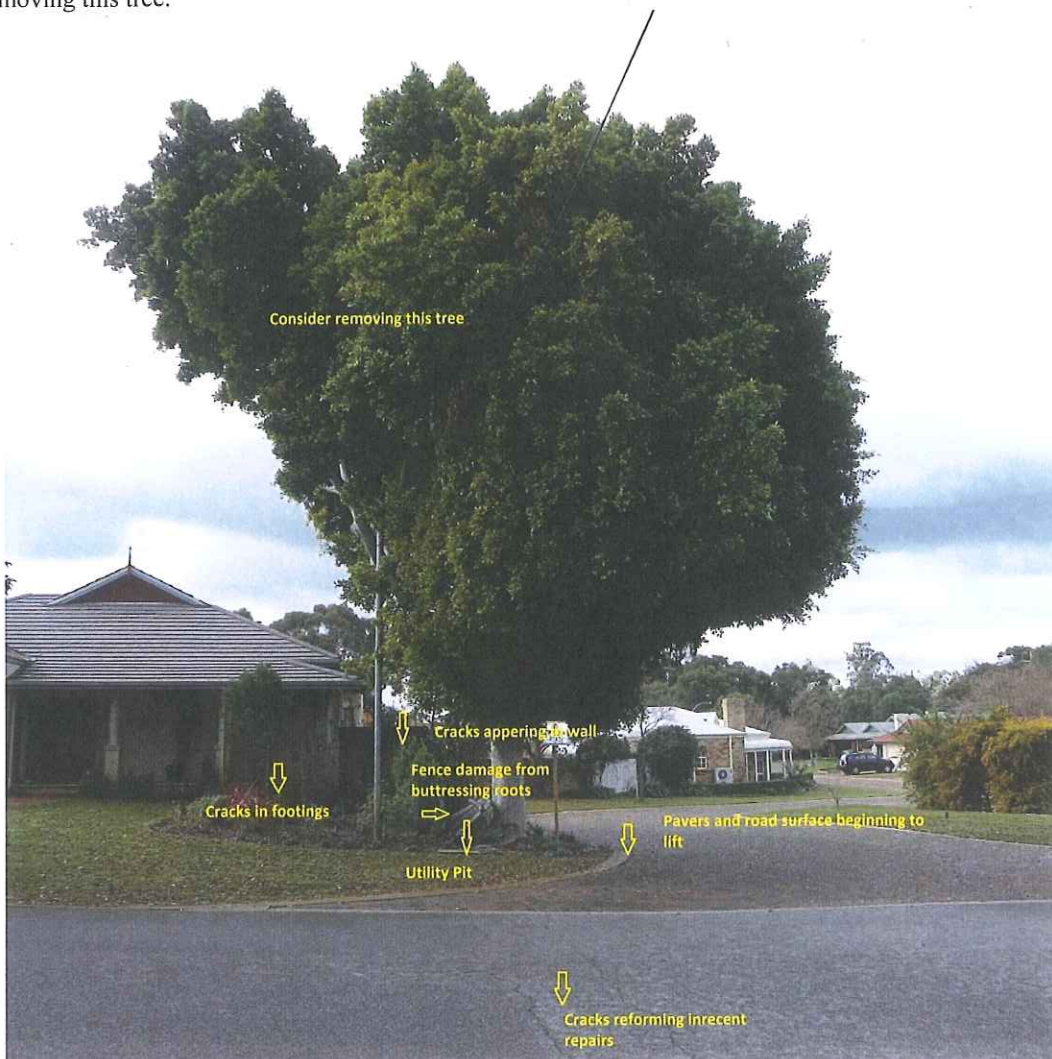
Recommendation

Root plate damage is evident here to the extent that, future stability issues can be anticipated, due to a combination of factors that have occurred as a result of past road and estate development.

They are.

- Severed roots and reduced growing media if insufficient quality and size to support the species.
- Predictable decay and degradation of the basal areas.
- Vulnerability to root plate failure from prevailing weather where the majority of root severance has occurred.
- Future predictable effects on an adjacent house due to proximity and growth habit of the tree.

Consider removing this tree.





Detail of area affected by developing root plate

Roots in conflict with services pits.

Root trajectory towards wall and

Substantial mechanical damage to root plate as indicated by yellow arrows leaves this tree vulnerable to future stability problems associated with inevitable decay. The integrity of the root plate and its interference appears to have been affected by past road works.

Item 2 54 Melvista Avenue

The trees at this site show a history of lopping or pollarding and this may have been to accommodate power lines which have in recent times been installed below ground.

There are sections where pollard heads have developed suggesting some skill in the work and the present length of the regrowth (epicormic) suggest the last pruning activity would have taken place approximately four to six years ago.

Epicormic growth resulting from trees that have been topped or lopped can and does lead to branch failures associated largely, to a result of competing growth and reduced holding capacity of the remnant branch or stem or coppiced area.

Some trees such as Ficus hillii do hold this type of growth better than other species, however they can fail, and because these failures are known to occur and are largely unpredictable, regular control and maintenance programs are always prudent to minimise problems.

Management of these trees can be undertaken in the form of targeting the areas previously cut, or by a process of selectively pruning dominant regrowth, thereby retaining reasonable shape and form as well as controlling excess load.

The property adjacent to the trees appears to have been recently, extensively renovated with inclusion of a rendered brick wall defining the boundary and the road reserve.

A root barrier dividing the trees and the fence may be a useful addition to reduce future damage from root encroachment. Root encroachment has also begun to lift curbing at the roads edge.

Recommendations

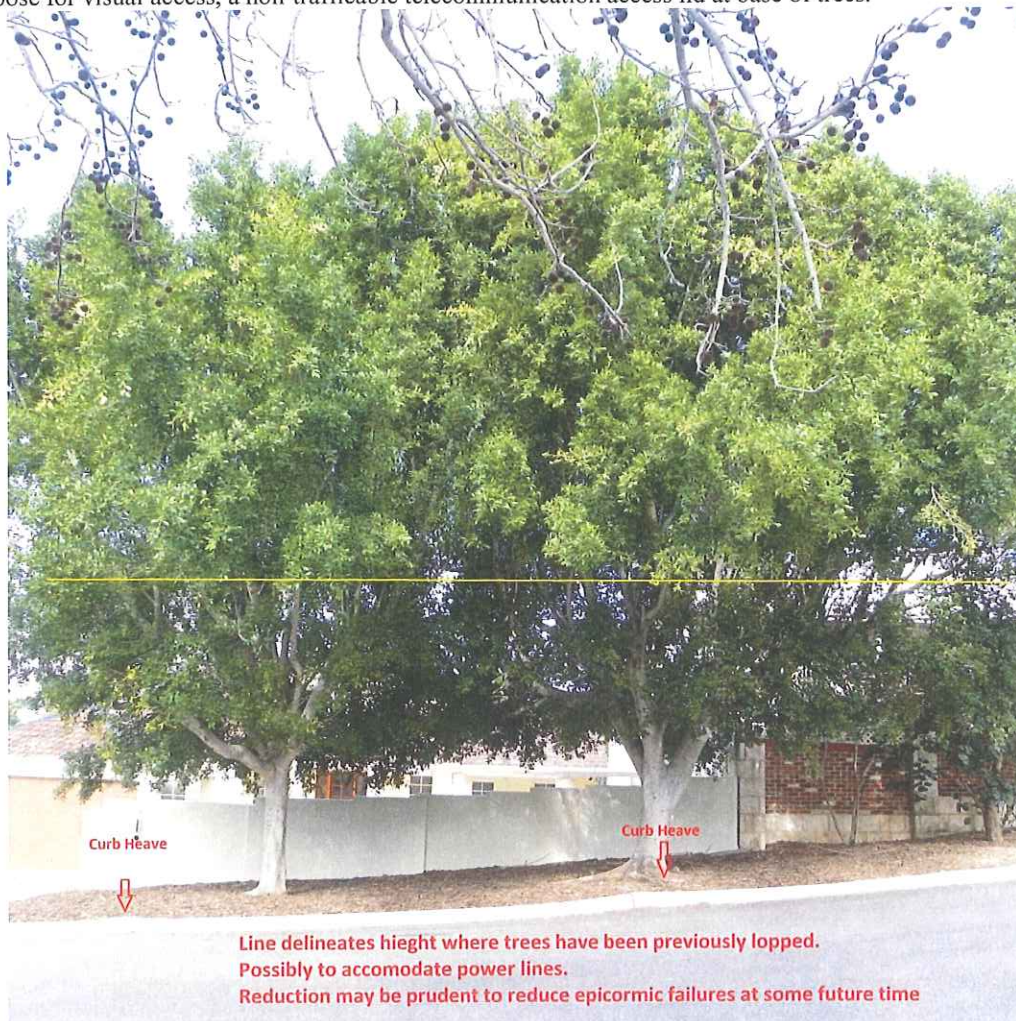
Consider crown reduction as an inclusion to bi annual maintenance.

This should be in the form of techniques that control excess height either by targeted pruning / removal of dominant growth to produce a reduce crown mimicking natural symmetry or maintaining previous pollarded height.

Consider also the inclusion of a root barrier and its maintenance between the trees and the newly constructed wall as well as curb line.

Carry out additional pruning to clear boundary line if this is of concern to ratepayer.

Clear and expose for visual access, a non-trafficable telecommunication access lid at base of trees.





Close up view of epicormic structures







Item 3 7 Archdeacon Street.

This is a healthy specimen measuring 23 metres overall in height taken by clinometer reading with a canopy diameter at its widest point of 20 metres

The canopy extends in a vertically ascending form from where it is planted in the road reserve 11 metres radius out towards the road and 10 metres radius with 6 metres across the boundary into the property at 7 Archdeacon Street, finishing a distance approximately 3 metres from the house.

The stem emerges from a well-defined buttress to about 1 metre above ground to form the bole and crown structure comprising of multiple stems.

There is some inclusion indicated, at a few branch / stem unions and this may require further investigation at some point.

The tree has a well-defined structure, that can be said to be consistent with its species and growth habit, and I found no other features either structural or physiological to provoke further investigation at the time of inspection.

The area surrounding the tree on the property side shows driveway and paved areas that appear to have been recently upgraded with no signs of having been affected by root incursion at the time.

It was also noted that the road on the west side of the tree appeared to have been re surfaced in the recent past showing no signs of cracking or deflection from root incursion.

A contrasting feature of this site however, was that the bitumenised cross over displayed a surface that could be estimated in terms of wear and tear, to be of an age approximating that of the tree of about + or – 50 years.

It is here that we can see cracks and some surface delamination and deformity consistent with root incursion over time.

Whilst it has not caused the surface to become dysfunctional, it does to some extent, provide an indication of how the root plate has developed and a reasonable outline of growth characteristic for its entire circumferential area.

This should serve as an important consideration for future selection and planting of trees in road reserves, particularly where zoning changes now allow for higher density housing development, bringing with it, reduced size of land parcels and road reserves now sharing a greater number of utilities and proximities which may become incompatible with tree species or size.

Conclusions

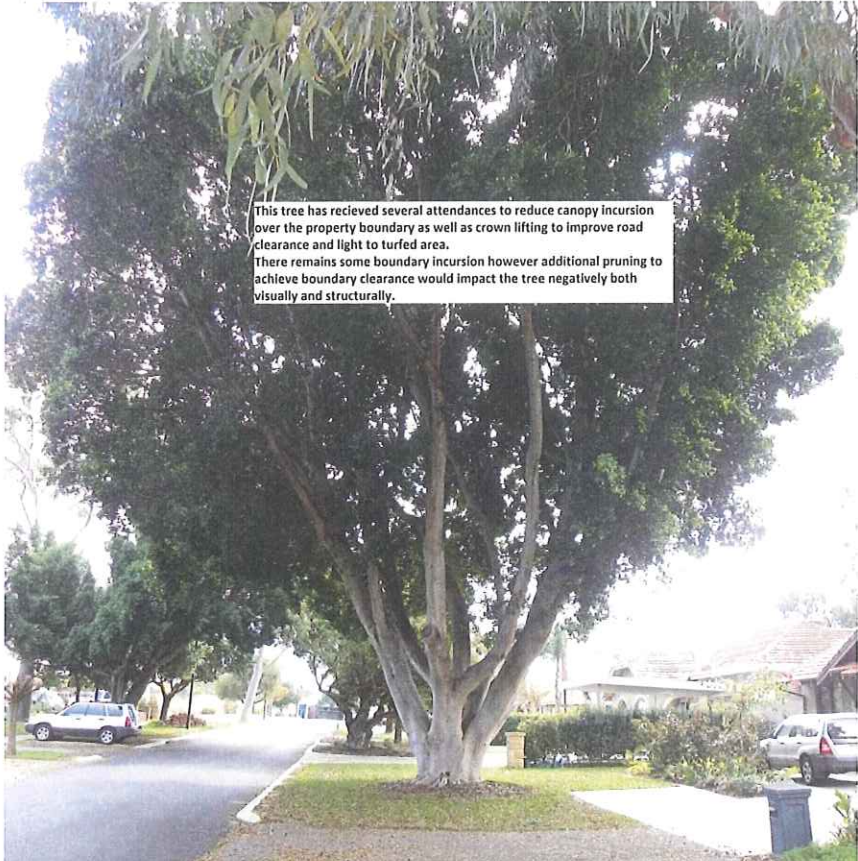
The tree at 7 Archdeacon at the time of inspection was found to be in good health overall and of a size and habit which can be said to be consistent with its species.

The tree has been attended to in the past for services to reduce encroachment of foliage into the property boundary to increase the availability of light to the turfed area and gardens.

It would be reasonable to consider also that root encroachment has taken place inside the boundary and under surfaces including the road; however I found no indications that these surfaces were affected at the time apart from the old crossover.

Recommendation

Continue to monitor the tree annually with some consideration to conservative pruning on the property boundary if requested. Full Boundary clearance should be avoided with this tree if possible.



This tree has received several attendances to reduce canopy incursion over the property boundary as well as crown lifting to improve road clearance and light to turf area. There remains some boundary incursion however additional pruning to achieve boundary clearance would impact the tree negatively both visually and structurally.



Pavement cracking from root development

Letter box appears to have some heave of perpendicular probably from roots.

Should you require any further assistance or clarification with this report, please call.

Regards

Jeff Ashe.



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