

STREET TREE STRATEGY

RISK MANAGEMENT PROCEDURES

Selection, Planting, Placement, Maintenance of Trees and
Removal Program

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OBJECTIVE

To provide a simple, systematic and readily usable procedure to facilitate the proper selection, planting and placement of new trees, and the ongoing maintenance of existing trees under the care and control of Gunnedah Shire Council.

To provide a strategy for the planting and replacement of trees to enhance the town's environment, along with staged schedules and associated costs to support the project.

The procedures have been developed using Statewide Mutual's Best Practice Manual 'Trees and Tree Roots'.

The Street Tree Strategy is to be used as a reference in conjunction with the following Council documents:

- Subdivision Guidelines
- Development Control Plan (DCP)
- Policy - Management of Trees on Footpaths, Roads and Reserves

1. NEW TREES

1.1 New Tree Selection Process

Most tree related problems are caused by inadequate tree selection and placement. The wrong tree in the wrong place can cause major problems including:

- Roots blocking and cracking sewer and water pipes,
- Damage to building foundations, kerb and guttering,
- Poor traffic visibility,
- Pedestrian access problems,
- Stoppages to power supply.

A flowchart has been developed to assist in the proper selection and assessment of new trees being planted in areas under the care and control of Council.

The tree selection flowchart is attached as Appendix 1.

To facilitate selection, a preferred species list detailing common and botanical names, recommended locations, classifications and characteristics has been tabulated. These lists are attached as Tables 3, 4 and 5.

1.2 Service Damage Circles

To ensure that new tree plantings do not adversely impact on overhead and underground services, footpaths and roadways and adjacent private properties, three damage control circles will be implemented.

Major, moderate and minor damage impact zones are illustrated in Figures 1, 2 and 3.

1.3 Risk Management Techniques for New Tree Planting

Pipes break due to the influence of other sources. One of these influences is the growth and pressure applied when rampant tree roots break and invade pipes.

Therefore it is important to identify the areas of concern and target particular hazardous trees or tree species.

Table 1 below is a list of possible risk management control strategies that can be implemented.

TABLE 1: RISK MANAGEMENT CONTROL STRATEGIES FOR NEW TREES

Control Strategy	Description
Root barriers	Installation of root barriers to appropriate depths at the time of planting will encourage deep rooting of trees away from services, pavements and other structures.
Soil composition	Compaction of the soil when back filling trenches or around utility easements and house footings will direct tree roots away from these areas. By achieving and maintaining compaction to 95%, root growth can be inhibited through the depravation of oxygen.
Pseudo street trees	Residents could be encouraged to plant trees within their boundaries in preference to street tree planting. This will allow larger species to be used, and reduce pressure on pavements and services.
Design of new roads and pathways	<ul style="list-style-type: none"> • Subdivision Guidelines • Development Control Plan (DCP) • Policy - Management of Trees on Footpaths, Roads and Reserves • No trees are to be planted within 20m of an intersection
Provision of aeration	Where there is to be continuous paving around a tree, the installation of an aeration and irrigation system should be considered.
Pavement openings	<ul style="list-style-type: none"> • Subdivision Guidelines • Development Control Plan (DCP) • Policy - Management of Trees on Footpaths, Roads and Reserves

2. EXISTING TREES

2.1 Tree Inventory and Documentation

An inventory of street trees is being compiled and contains details of species, common names, age, height and locality.

The inventory when completed will be displayed in Dataworks.

2.2 Hazard Reporting

Tree hazards should be reported and remediated if necessary using Council's Appendix 3 'Tree Hazard Rating' sheet and Appendix 4 Tree Inspection Report.

2.3 Inspections

In order for a tree to pose a hazard there must be a likelihood of risk that the tree will do damage. To evaluate the degree of hazard refer to Appendix 3 - Tree Hazard Rating.

The Rating factors are:

- 1 Immediate personnel/property damage
- 2 Potential personnel/property damage
- 3 Make area safe for the public
- 4 Situation is safe for the public
- 5 No works required

Council's 'Tree Hazard Rating Sheet' and Tree Inspection Report forms are be used for all tree inspections. A copy of both the rating and report sheets is attached as Appendices 3 and 4.

2.4 Inspection Schedule

The frequency of inspections will vary depending on the location of the tree.

High Usage Areas (Main Street, high profile sports fields & parks)	Inspect annually
Medium Usage Areas (side streets, trees on paved footpaths, parks)	Inspect every 2 years
Low Usage Areas (back streets, trees on unpaved footpaths, villages)	Inspect every 3 years

2.5 Inspection Staff

Inspections will be undertaken by appropriate staffs that has an understanding of tree-related risks and defects. These will preferably be members of Council's Parks and Gardens Team. All inspectors will be trained in the systems and recording methods which support this procedure.

2.6 Assessment

The Tree Hazard Rating Sheet (Appendix 3) and the Tree Inspection Report (Appendix 4) will be used for the identification, prioritising and programming of tree maintenance works, where remediation of identified hazards is necessary.

Routine maintenance such as pruning, etc., will be carried out on a needs basis.

When assessing the risk associated with a particular tree, the following flowchart (Appendix 2) should be used, in conjunction with table 2 below.

TABLE 2: RISK MANAGEMENT STRATEGIES FOR EXISTING TREES

Strategy	Description
Monitor trip points	Where no other practical method can be employed to prevent occurring, a regular trip point inspection program should be instigated and pavement replaced or repaired as necessary.
Flexible pathways	Use of flexible material such as bitumen or paving for footpaths around trees will reduce the occurrence of trip points and is cheaper and easier than concrete to maintain or replace when necessary.
Re-direct pathways	Where space allows, pathways should be re-directed away from trees/tree roots. It may also be beneficial to reduce the newly directed pathway width.
Bridging footpaths	Self-supporting construction methods, such as pier and beam could be used to raise pathways above the roots, allowing for root expansion without damaging the pavement.
Root pruning	Non-structural roots could be pruned on a regular basis under the guidance of a qualified arborist. This practice could be combined with root barriers where appropriate.
Root barriers	Where future problems are perceived, barriers could be installed to deflect the roots away from pavement or services.
Tunnelling for services	Tunnelling rather than trenching for underground services will greatly reduce injury to tree roots. If located deeply, root contact with the pipeline may be minimised as the roots of most trees are located within the top 1 metre of soil (based on a soil with medium texture).
PVC piping	Replacement of porous piping and rubber rings mains with PVC or polyurethane mainlines to prevent tree root entry.
Preventative maintenance	Trees in public areas should be inspected on a regular basis and maintenance, such as dead wooding and pruning carried out as necessary. NB: all pruning should be in accordance with AS 4373-1996.
Raising pathways	Where appropriate, pathways could be raised to reduce direct root pressure on the pavement. Care must be taken not to build up soil against the trunk of the tree. Aeration piping, in conjunction with geotextile fabric and gravel, should be installed between root zone and new pavement to aid with air exchange. Care should be taken to shape the new surface to drain water away from the trunk of the tree.
ABC cabling	Replacement of existing overhead powerlines with bundled cables will reduce both the clearance needed and pruning required.
Diverting services	Services could be diverted along roadways, rather than in the nature strip, where a valuable strand of trees is present. To make this option more attractive to service providers, Council may wish to consider waiving road opening fees.
Diverting kerb/gutter	Where possible, kerb/gutter could be diverted around tree roots or further way from the trunk, creating an island around the tree.
Enlarging root zone	Where space allows, a designated area above the root zone of the tree should be enlarged/created to accommodate surface roots. Rather than turf, this area could be formed into a garden bed, mulched or covered with an iron tree grate.
Removal	In some situations it may be preferable to remove the offending tree and replace with a more suitable species or in an alternative location. This will be the case in respect to tree/shrubs planted within 20m of an intersection due to restriction of vision.

2.7 Controls

Tree hazards will be reported by Council either through:

- a) regular formal inspections,
- b) informal inspections by Works Staff, or
- c) Reports/complaints from the general public

Reports/Complaints from the general public should be processed through Appendix 6 - Street Tree Removal/Lopping Application.

2.8 Hazard Remediation / Maintenance Recording

Hazard Remediation Works and general tree maintenance works carried out on individual trees will be recorded on Council's proforma 'Tree Maintenance Return', attached as Appendix 5.

Completed copies of the form will be submitted by the Parks & Gardens Overseer or his representative.

2.9 Monitoring

The effectiveness of the inspection, assessment and control mechanisms outlined in this procedure will be assessed by the Infrastructure Services Director and/or Manager of Public Facilities, or their delegated representative as required.

The annual tree maintenance program, based on available resources, will be approved by the Manager Public Facilities.

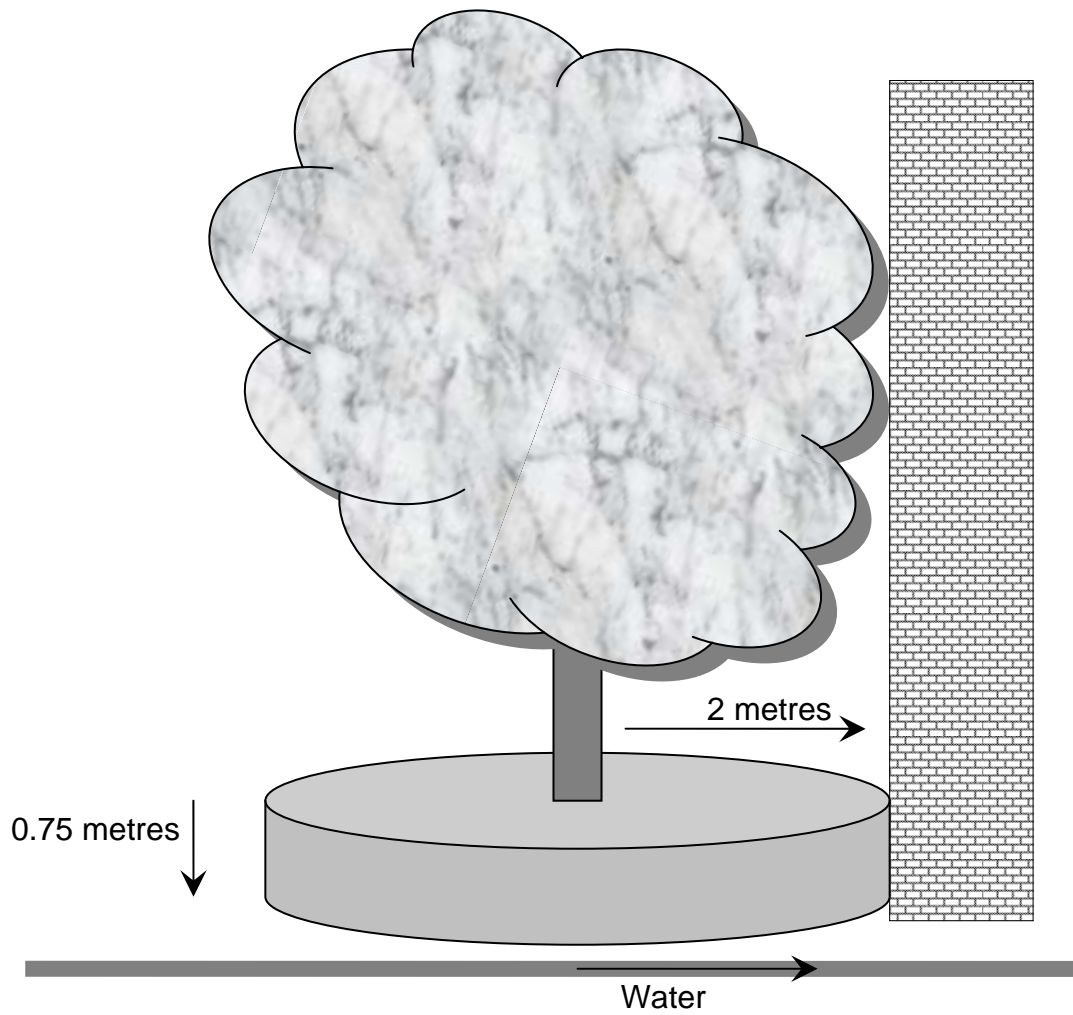
2.10 Allocated Resources

The remediation of hazard rating 1 and 2 sites is Council's highest priority. An annual budget will be sought from Council which will reflect the level of effort required to remediate all rating 1 and rating 2 sites.

The extent of works will be determined by the operational resources and available funding.

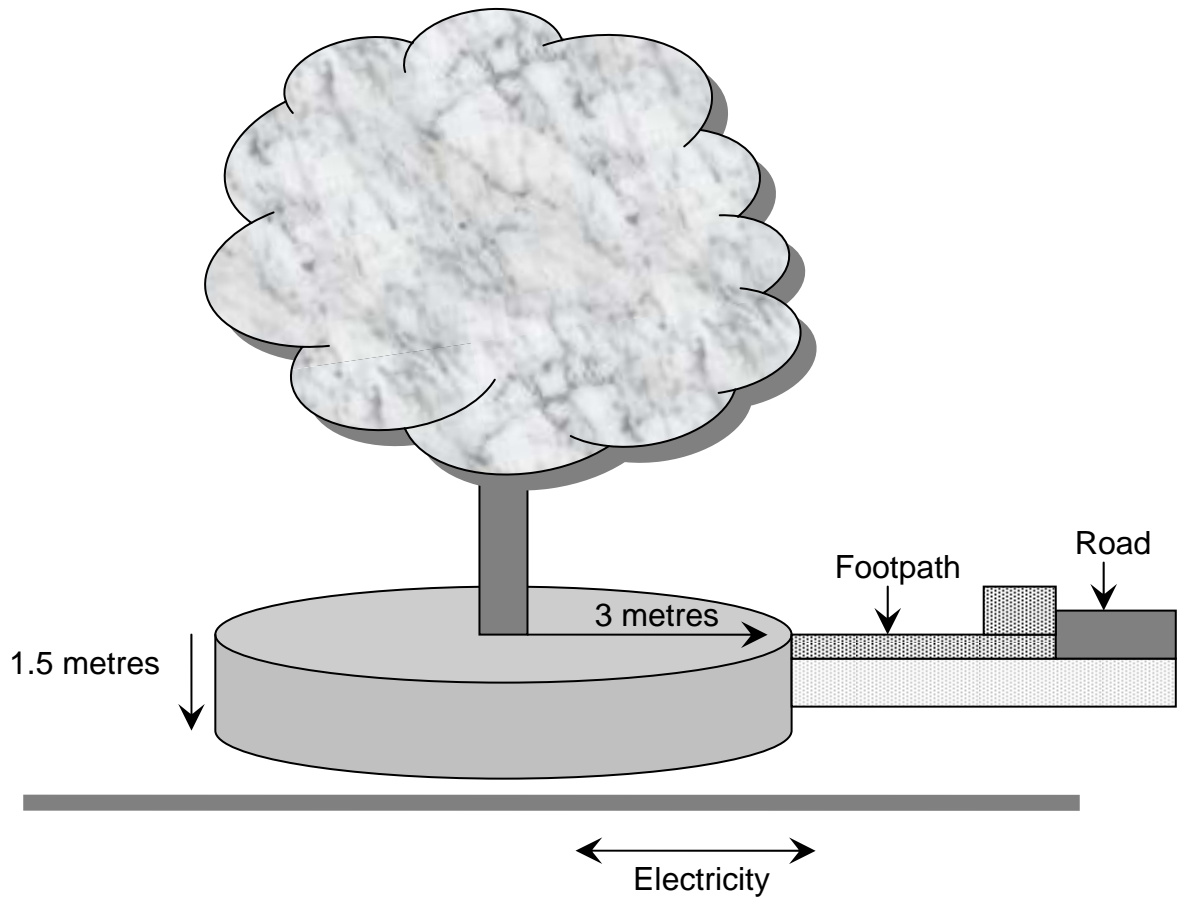
Routine maintenance works, eg, tree replacement and pruning will be carried out as and when required.

FIGURE 1: RED ZONE – MAJOR DAMAGE IMPACT



Council will not allow planting of trees within this damage circle. The potential for severe damage is high and may occur to water pipes, sewerage pipes, gas lines, structures and many other facilities. Council should refer to Table 3 – the preferred species list to select the trees for this area.

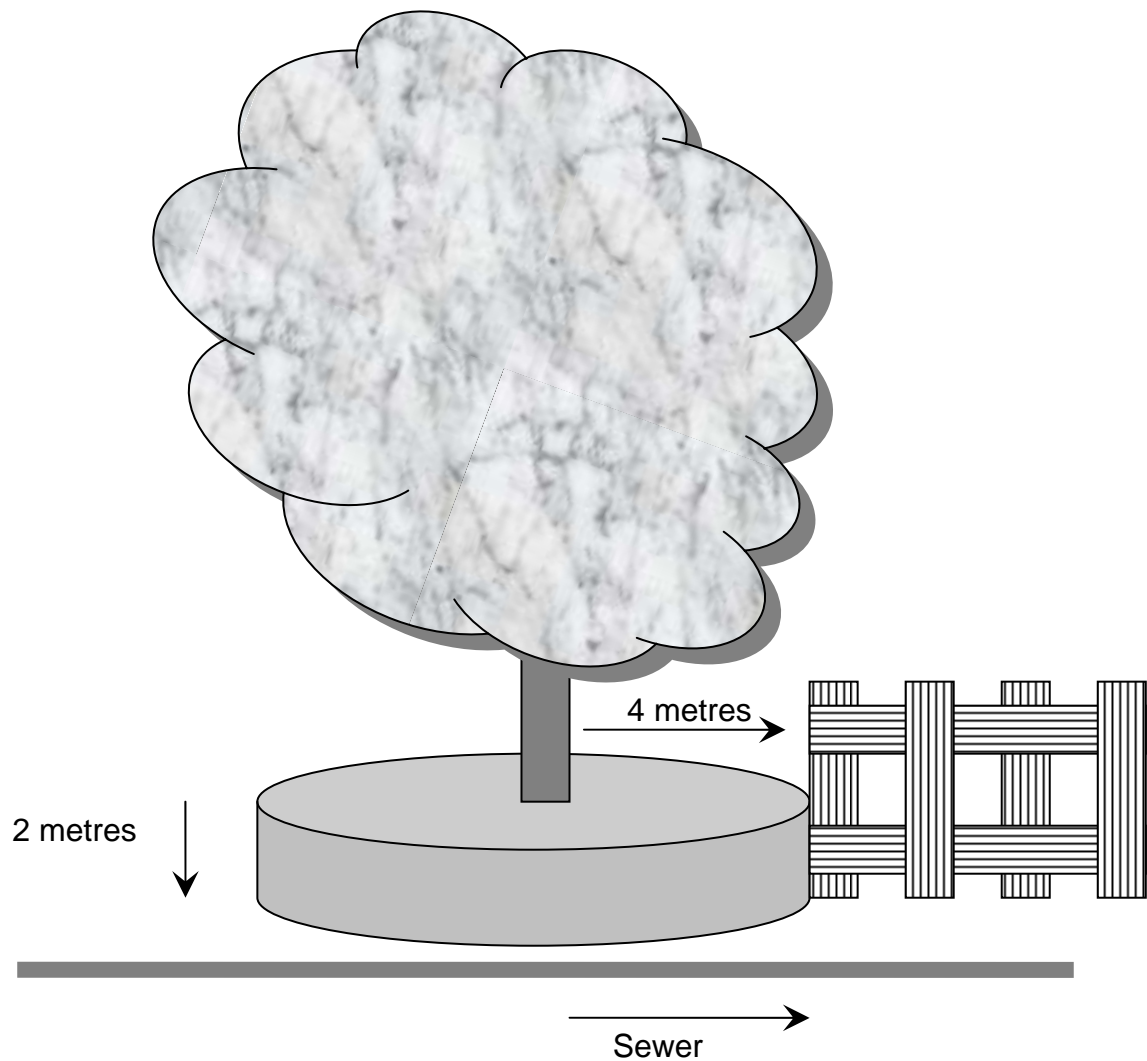
FIGURE 2: YELLOW ZONE – MODERATE DAMAGE IMPACT



Trees planted within this damage circle may cause moderate damage to water pipes, sewerage pipes, gas pipes, telecommunication services, footpaths, roads and structures.

It is acceptable to plant selected trees in this area, once Council has reviewed the characteristics of the tree and appropriate mitigation measures have been installed. Council must be convinced that damage will be minimal. Council should refer to Table 4 – the preferred species list to select the trees for this area.

FIGURE 3: GREEN ZONE – MINOR DAMAGE IMPACT



Trees planted within this damage circle are unlikely to cause serious damage to services. It is acceptable to plant most trees in this area as they are less likely to cause damage. Council should endeavour to select the most appropriate trees for this area from Table 5.

TABLE 3: PREFERRED SPECIES LIST

AREAS WITH SEWER, WATER, POWER LINES AND FOOTPATHS

Name of Tree (Botanical) (Common)	Height (metres)	Depth of Root System	Branch Spread	Classification		
				Small	Medium	Large
Acacia Pendula Myall wattle	8		4	✓		
Acacia podalyrifolia Mt Morgan Wattle	5-6		5-6	✓		
Albizia julibrissin Silk tree	8-10		5		✓	
Keolreuteria paniculate Golden rain tree	6		4	✓		
Fraxinus griffithii Evergreen ash				✓		
Lagerstroemia indica Crepe myrtle	6-8		5-6		✓	
Photinia glabra 'Rubens' Small leaf photinia	4-5		3-4	✓		
Photinia x fraseri 'Robusta' Large leaf photinia	4-5		4-5	✓		
Photinia serrulate Chinese hawthorn	6-8		4-5	✓		
Sapium sebiferum Chinese tallow tree	8-10		5-6		✓	
Photinia serrulatifolia Chinese photinia	6-8		4-5	✓		a
Callistemon Citrinus Lemon scented bottlebrush	3		3	✓		

TABLE 4: PREFERRED SPECIES LIST

AREAS WITH NO WATER OR SEWER LINE AND WITH POWER LINES AND FOOTPATHS

Name of Tree (Botanical) (Common)	Height (metres)	Depth of Root System	Branch Spread	Classification		
				Small	Medium	Large
Acacia Pendula Myall wattle	8		4	✓		
Acacia podalyrifolia Mt Morgan Wattle	5-6		5-6	✓		
Albizia julibrissin Silk tree	8-10		5		✓	
Callistemon Citrinus Lemon scented bottlebrush	3		3	✓		
Callistemon 'Harkness'	4-6		3-4	✓		
Callistemon 'Kings Park Special' Bottlebrush	4-6		3-4	✓		
Callistemon salignus Willow bottlebrush	8-12		4-6		✓	
Callistemon viminalis Drooping bottlebrush	9-12		5-6		✓	
Callistemon viminalis 'Hannah Ray' 'Hannah Ray'	4-5		3-4	✓		
Keolreuteria paniculate Golden rain tree	6-8		4-6	✓		
Fraxinus griffithii Evergreen ash				✓		
Lagerstroemia indica Crepe myrtle	6-8		5-6		✓	
Melaleuca armillaris Honey myrtle	5-6		6-7	✓		
Photinia glabra 'Rubens' Small leaf photinia	4-5		3-4	✓		
Photinia x fraseii 'Robusta'	4-5		4-5	✓		

Name of Tree (Botanical) (Common)	Height (metres)	Depth of Root System	Branch Spread	Classification		
				Small	Medium	Large
Large leaf photinia						
Photinia serrulate Chinese hawthorn	6-8		4-5	✓		
Prunus cerasifera "Nigra" Purple leaf prunus						
Sapium sebiferum Chinese tallow tree	8-10		5-6		✓	
Photinia serrulatifolia Chinese photinia	6-8		4-5	✓		
Acer buergeranum Trident maple	6-10		3-6		✓	

TABLE 5: PREFERRED SPECIES LIST

AREAS WITH NO POWERLINES, SEWERLINES, WATERLINES AND FOOTPATHS

Name of Tree (Botanical) (Common)	Height (metres)	Depth of Root System	Branch Spread	Classification		
				Small	Medium	Large
Acacia Pendula Myall wattle	8		4	✓		
Acacia podalyrifolia Mt Morgan Wattle	5-6		5-6	✓		
Acacia Saligna Golden Wreath Wattle	4-8		4-8	✓		
Acer Buergeranum Trident Maple	6-10		3-6		✓	
Acer Negundo Box elder maple	12-15		10-12			✓
Acer pseudoplatanus Sycamore maple	15-20		15			✓
Albizia julibrissin Silk tree	8-10		5		✓	
Alnus jorullensis	12-15		6-8		✓	
Callistemon Citrinus Lemon scented bottlebrush	3		3	✓		
Callistemon 'Harkness'	4-6		3-4	✓		
Callistemon 'Kings Park Special' Bottlebrush	4-6		3-4	✓		
Callistemon salignus Willow bottlebrush	8-12		4-6		✓	
Callistemon viminalis Drooping bottlebrush	9-12		5-6		✓	
Callistemon viminalis 'Hannah Ray' 'Hannah Ray'	4-5		3-4	✓		
Casuarina cunninghamiana River Oak	20-30		10-15			✓
Cedrus deodara	15-25		10-12			✓

Name of Tree (Botanical) (Common)	Height (metres)	Depth of Root System	Branch Spread	Classification		
				Small	Medium	Large
Cinnamomum camphora Camphor laurel	15-20		15			✓
Eucalyptus elata River peppermint gum	20-30		15			✓
Eucalyptus Camaldulensis River red gum	20-30		15			✓
Eucalyptus camaldulensis subsp	12		8		✓	
Eucalyptus melliodora Yellow box	20-35		10-15			✓
Eucalyptus robusta Swamp mahogany	20-25		10			✓
Eucalyptus nicholii	10-15		10		✓	
Eucalyptus saligna Sydney blue gum	40		15			✓
Eucalyptus sideroxylon sub sp	25		10-12			✓
Fraxinus excelsior 'Aurea' Golden Ash	10-12		10-12		✓	
Fraxinus oxycarpa Desert Ash	10-12		10-12		✓	
Fraxinus 'Roywood' Claret Ash	15-20		15-20			✓
Fraxinus griffithii Evergreen Ash				✓		
Gledistia triacanthos 'Sunburst' Golden Gledistia	30		20			✓
Grevillia robusta Silky oak	15-20		10			✓
Keolreuteria paniculate Golden rain tree	6-8		4-6	✓		

Name of Tree (Botanical) (Common)	Height (metres)	Depth of Root System	Branch Spread	Classification		
				Small	Medium	Large
Lagerstroemia indica Crepe myrtle	6-8		5-6	✓		
Liquidambar styraciflua Liquidamber	30		20-30			✓
Melia azedarach White cedar	10		9		✓	
Melaleuca armillaris Honey myrtle	5-6		6-7	✓		
Photinia glabra 'Rubens' Small leaf photinia	4-5		3-4	✓		
Photinia x fraseii 'Robusta' Large leaf photinia	4-5		4-5	✓		
Photinia serrulate Chinese hawthorn	6-8		4-5	✓		
Photinia serrulatifolia Chinese photinia	6-8		4-5	✓		
Picea pungens 'Glauca' Blue spruce	8-12		5-8		✓	
Pinus Patula Mexican pine	1		12		✓	
Pinus radiata Radiata pine	24		10-12			✓
Pistacia Chinensis Chinese pistachio	8-15		6-8		✓	
Platanus x hybrida London plane tree	30		30			✓
Populus alba White poplar	12-18		10		✓	
Populus deltoides American Poplar	18-25		7			✓
Populus nigra 'Italica' Lombay poplar	12-30		4.5-9			✓

Name of Tree (Botanical) (Common)	Height (metres)	Depth of Root System	Branch Spread	Classification		
				Small	Medium	Large
Prunus x blireana Blireana plum	3.5-5		3-4	✓		
Prunus cerasifera 'Nigra' Purple leaf gum	6-8		3-4	✓		
Prunus persica Flowering peach	3-4		3-4	✓		
Prunus serrulate Japanese flowering cherry	3-4		3-4	✓		
Robinia pseudoacacia 'Frisia' Golden Robinia	10		8		✓	
Quercus robur English oak	20		20			✓
Salix babylonica Willow tree	12-18		12-18			✓
Salix matsudana Tortured willow	10-15		10		✓	
Schinus areira Peppercorn tree	10-15		10		✓	
Sapium sebiferum Chinese tallow tree	8-10		5-7		✓	
Sophora Japonica Japanese pagoda tree	15-27		6-8			✓
Trachycarpus fortunei Chinese windmill palm	3-10		3		✓	
Taxodium distichum Swamp cypress	30-50		8-10			✓
Lumus glabra 'Lutescens' Golden elm	15-20		10-12			✓
Vimus parvifolia Chinese elm	12-15		10			✓
Melaleuca armillaris Honey myrtle	18-25		10			✓

3. TREE REMOVAL PROGRAM/SCHEDULES & BUDGET ALLOCATION

Council allocates \$97,000 in the parks & gardens operational budget for tree maintenance works annually.

The Tree maintenance budget will be divided into three sections:

- Routine Tree Maintenance
- Tree Removal Associated with Infrastructure Renewal
- Tree Removal Associated with Street Tree Improvement/Enhancement Program

The Tree Removal Associated with Street Tree Improvement/Enhancement Program will initially address the town's entrance trees in two stages:

- Street entrance trees within the town's precinct
- Street entrance trees beyond the town's precinct

3.1 Routine Tree Maintenance

It is anticipated that from this budget an allocation of \$57,000 annually will be budgeted for tree related maintenance works associated with the routine Council tree inspection program, storm damage and Community requests through the street tree lopping/removal process within the town's precinct. Appendix 5.

This allocation of the budget will also allow for the removal of non-suitable street trees i.e. impacting infrastructure services, power lines etc. with a more suited species from table 3 & 4 selection list.

3.2 Tree Removal Associated with Infrastructure Renewal

An allocation of \$10,000 annually will be budgeted from the Parks & Gardens Operational Tree maintenance budget for tree related works associated to the renewal of infrastructure services i.e. water mains, kerb and guttering, road upgrades etc. within the town's precinct.

These associated works will cover the lopping and or removal of existing trees that are impacting Council's services and or trees that will be impacting the renewal of infrastructure services within the town's precinct and their replacement if required with a more suitable species selected from the lists above.

3.3 Tree Removal Associated with Street Tree Improvement/Enhancement Program

An allocation of \$30,000 annually will be budgeted from the Parks & Gardens Operational Tree maintenance budget for the removal and or replacement of suitable street trees to complement and enhance the streetscape environment along with the establishment maintenance.

The program will provide for the removal of unsuitable street trees and replacement with more suitable species that will not impact Council's infrastructure, require limited maintenance and create a corridor entrance to town.

Trees will be removed from the footpath and suitable species planted within the road in root barriers and tree cages.

The project will be identified in two stages:

3.4 Entrance Tree Staging

Stage 1 - Street entrance trees within the town's precinct – refer to plan A & A1.

Stage 1 Plan (A)

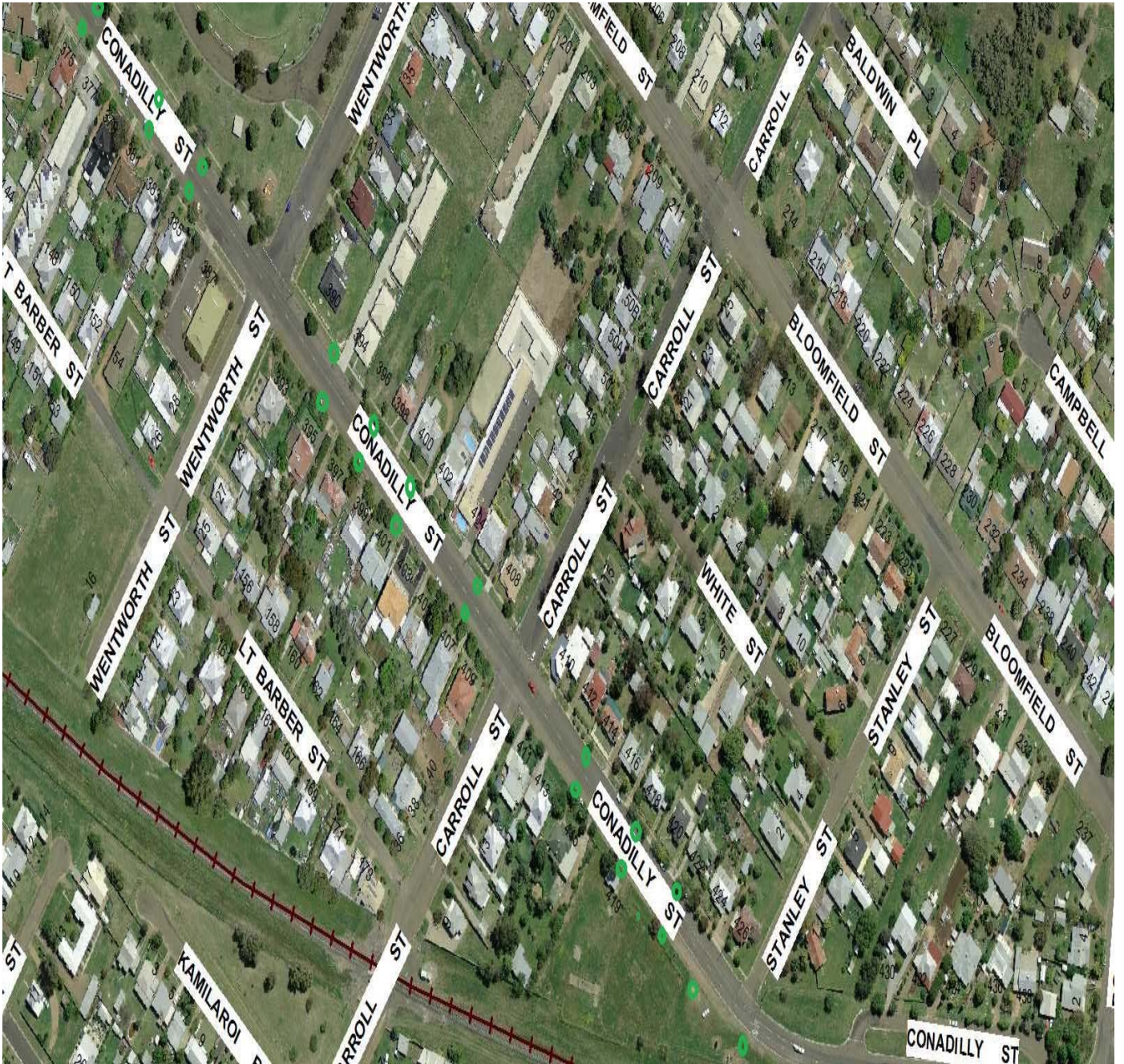
Removal of all footpath trees either side from Chandos Street through to Warrabung Street and replant with Liquid Ambers (**Green**) within the street in root barriers.

No trees to be planted from Warrabung street west to the bridge over Black Jack Creek due to large vehicle movements.



Stage 1 Plan (A1)

Removal of all footpath trees both side from Abbott Street through to Stanley Street and replace replant with Liquid Ambers (Green) within the Street in root barriers.



Stage 2 - Street entrance trees beyond the town's precinct (To town entrance signage)
– refer to Plan B, B1 & B2.

Stage 2 Plan (B)

Plantings of iron bark trees (**Blue**) at the roundabout at View and South Street, and then continue the Iron bark plantings along the southern side of the Mullaley road through to the entrance signage to complement the existing established plantings of gum trees. The space within the southern corridor of the Mullaley road will allow for a forest entrance effect.

Plantings of Callistemon (**Red**) along the northern side of the Mullaley road in areas where no trees exist and in front of the industrial areas, the plantings of callistemon will not impact traffic movement into the industrial areas and will complement the existing callistemon trees.

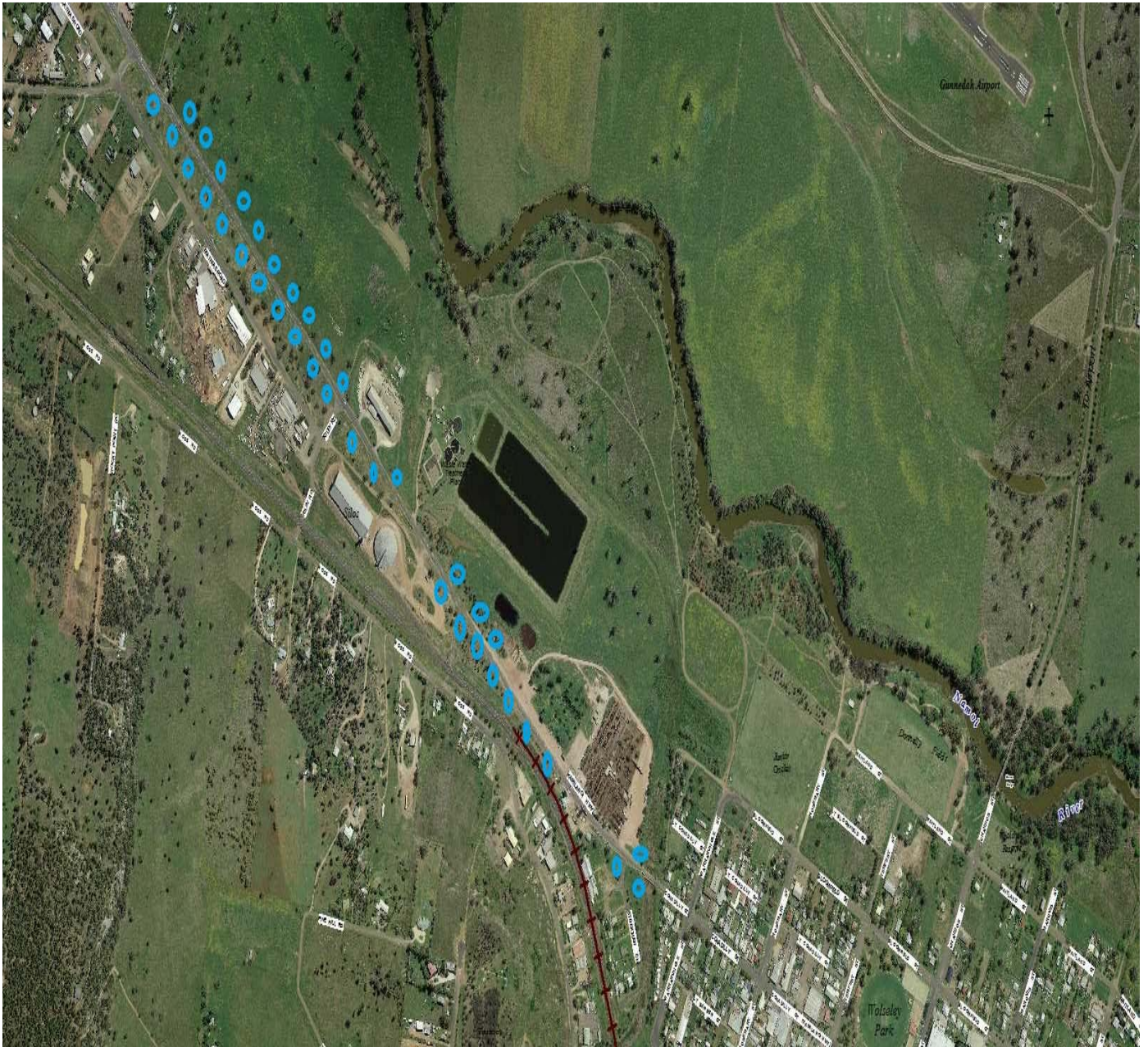
The plantings will occur within the footpath areas and road corridor areas and not on the roads so heavy vehicle movements are not restricted.



Stage 2 Plan (B1)

Plantings of iron bark trees (Blue) in the road verge from the black jack creek bridge on the Kamilaroi highway heading north on both sides of the road to the entrance signage.

The plantings will complement the existing trees planted and create a corridor consistent with the Mullaley and Sydney road entrances



Stage 2 (B2)

- Removal of all existing Street trees along Conadilly Street through to Stanley Street and replace with Liquid Ambers planted in root barriers within the road on the northern side of Conadilly Street and in the road verge on the southern side.
- Complimentary plant iron bark trees from Stanley Street through to the Mooki Bridge (Tamworth road) and along the Sydney road through to the sixty kilometre road sign.



3.5 Tree Species Stage 1

The trees identified in this stage will be a selection of the following species:

Note: the colour lettering of the tree species is reflected in the attached plans for the location of these plantings; the tree planting locations are a guide and will be dependent on existing infrastructure, driveways and side roads/streets

Liquidambar styraciflua – Liquid amber

This species is widely used in Australia as an ornamental tree both in private and public areas. The trees are deciduous and the autumn leaves make a spectacular show when they change colour. The trees will commonly grow to a medium sized tree of 20 ~ 30 metres height, however grown in a root barrier the trees growth will be restricted and is estimated to gain a height of 10-15m. The falling leaves and spiky seedpods can be a nuisance but the nuisance is regarded as being minor and not ongoing. The trees have sound timber and are not particularly prone to failure and the planting of the Liquid Ambers will create shade and an urban forest environment with in the town's precinct.

Planting the Liquid Ambers within root barriers within the street will reduce the impact on the infrastructure, ie lifting pavers, kerb and guttering and will restrict the tree from gaining full height and impacting power lines.

The trees' understorey will be trimmed and maintained to a height of 3-4 metres, so vehicles can park underneath and does not restrict vehicular vision.



Callistemon viminalis - Drooping bottlebrush

The weeping bottlebrush is typically a small tree with pendulous foliage although some forms are more pendulous than others. It reaches a height of about 8- 2 metres in its natural habitat, however grown in a root barrier the tree is estimated to gain a height 8m.

The tree is an attractive and reliable small tree for street planting and the nectar-rich flowers of the Bottlebrush are favoured by a host of nectar feeding birds.

Once established it is able to tolerate extended dry periods. The plant performs best in medium to heavy soils and can tolerate less than perfect drainage.

The tree would be a suitable street tree planted within the road corridor and in areas where power lines exist to enhance the street environment.

The tree would also be maintained to one trunk (single leader) and the trees understorey maintained at a height of 3m so vehicles can park underneath and does not restrict vehicular vision.



3.6 Tree Species Stage 2

The tree identified in this stage will be a selection of the following species:

Note: the colour lettering of the tree species is reflected in the attached plans for the location of these plantings.

Eucalyptus sideroxylon – Mugga Iron Bark

The red ironbark or Mugga is a large tree growing to 25m, when young the trunk of this tree is a bright rust colour becoming thick and dark, frequently black, with maturity. It features blue-grey foliage and dense clusters of pink to red flowers appearing over a lengthy period from winter to spring and early summer which is a great favourite with nectar seeking birds.

The tree tolerates poor and shallow soils ranging from sand to gravel to clay, but it is equally at home in good quality loam. It is a strong, hard wearing and versatile tree that is frost resistant and is drought tolerant, it is an attractive tree that makes a highly effective feature and corridor into town.

The trees would be maintained to one trunk (single leader) and the trees understorey maintained at a height of 4m, so vehicles can park underneath and does not restrict vehicular vision.



Callistemon viminalis - Drooping bottlebrush

The weeping bottlebrush is typically a small tree with pendulous foliage although some forms *are more pendulous than others*. It reaches a height of about 8 - 12 metres in its natural habitat, however grown in a root barrier the tree is estimated to gain a height 8m.

The tree is an attractive and reliable small tree for street planting and the nectar-rich flowers of the Bottlebrush are favoured by a host of nectar feeding birds.

Once established it is able to tolerate extended dry periods. The plant performs best in medium to heavy soils and can tolerate less than perfect drainage.

The tree would be a suitable street tree planted within the road corridor and in areas where power lines exist to enhance the street environment.

The tree would also be maintained to one trunk (single leader) and the trees understorey maintained at a height of 3m so vehicles can park underneath and does not restrict vehicular vision.



3.7 Staging of Works

The schedule of works and timing for the staged removal/replacement and planting of new entrance trees will be undertaken given consideration to financial allocations, resources and establishment periods.

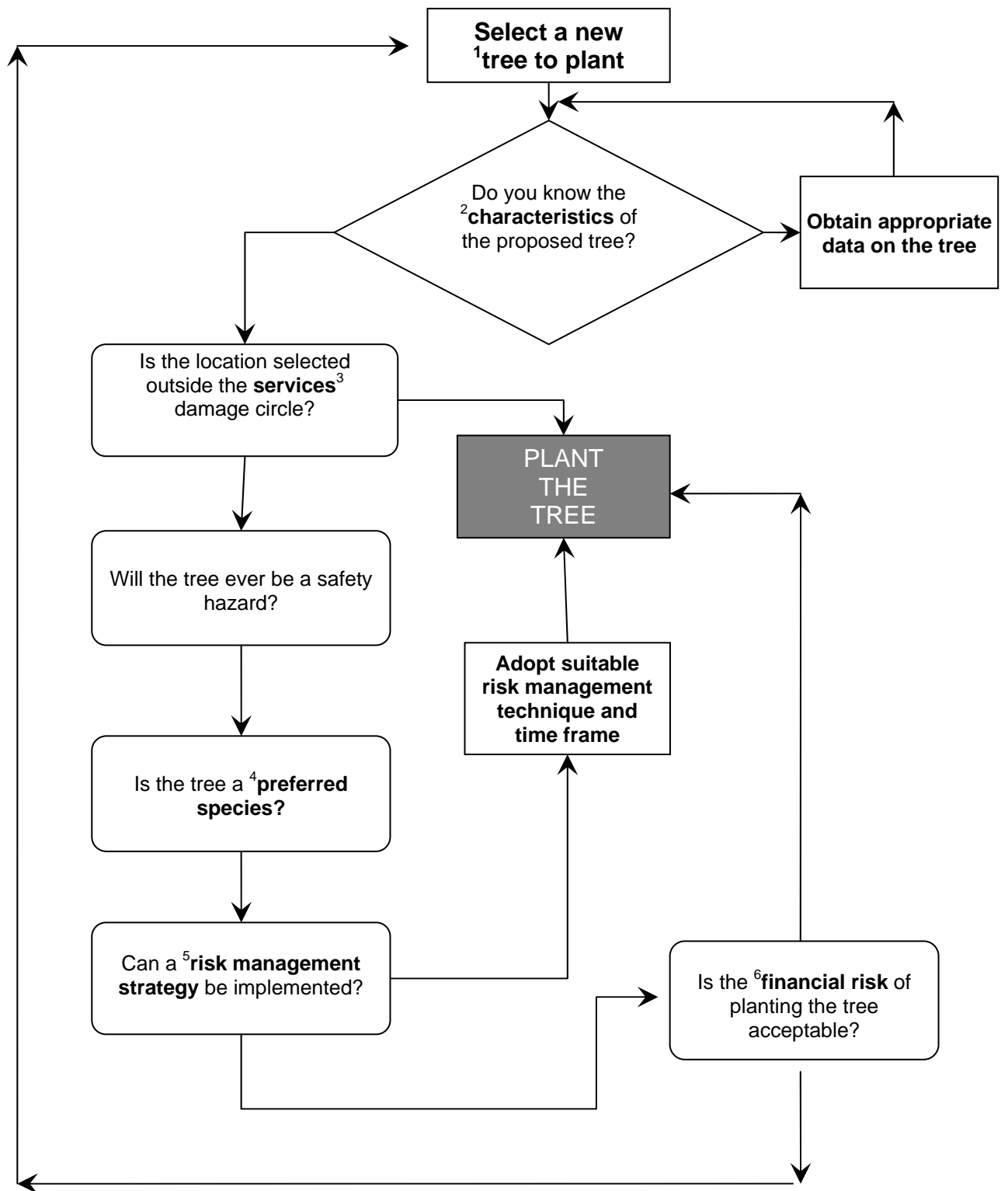
Stage 1 Schedule

- | | |
|-----------|---|
| 2015 – 17 | Removal and replacement of the footpath trees along Conadilly Street from Chandos to the Black Jack Creek bridge (north) Plan A |
| 2017 – 19 | Removal and replacement of the footpath trees along Conadilly Street from Osric Street through to Stanley Street (East) Plan A1 |

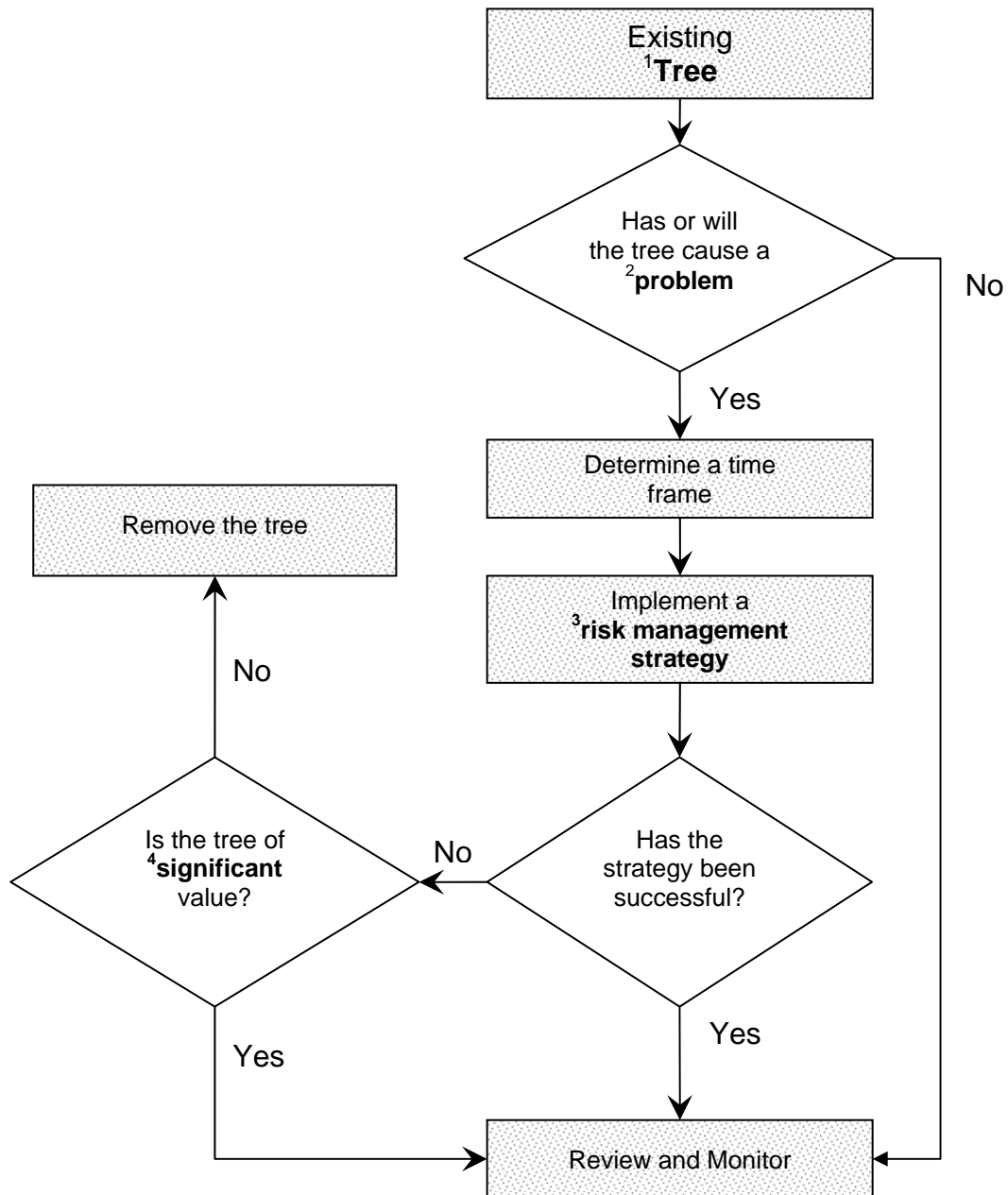
Stage 2 Schedule

- | | |
|-----------|---|
| 2019 – 21 | Tree planting from View/South Street roundabout along the Oxley Highway west to town entrance sign Plan B |
| 2021 – 22 | Tree planting from Black Jack Creek road bridge along the Kamilaroi Highway (north) Plan B1 |
| 2022 – 24 | Removal and replacement of the footpath trees along Conadilly Street from Stanley Street through to the bridge over the Mooki River (Oxley Highway east) and sixty kilometre road speed sign (Kamilaroi Highway south) Plan B 2 |

APPENDIX 1 - Tree Selection Process



APPENDIX 2 - Existing Tree Review Process



If the tree has or will cause a problem, consideration should be given to one of the risk management strategies listed in Table 2.

APPENDIX 3 - Tree Hazard Rating

HAZZARD RATING	COUNCIL ACTION	TARGET TIME FOR SERVICE
1 – Immediate personnel/property damage	Action works immediately remove/trim & or make safe for the public until works can be completed ASAP	As soon as practically possible
2 – Potential personnel/property damage	Make area safe for the public, remove/trim tree	1 month
3 – Medium/no immediate threat	Make area safe for the public if required, schedule works as required	As required
4 – Low/safe	Situation is safe for the public, schedule works as soon as funding & resources are available	schedule works within budget when funding & resources are available
5 – No works required	No work required, notify applicant	Review in 12 months

APPENDIX 4 - Tree Inspection Report

TREE ASSESSMENT REPORT

Date of inspection	
Inspected by	
Hazard rating	
Reason for inspection	
Tree type, height, base width, est. age & numbers (Attach Photograph)	
Address/location	
Tree significance i.e. endemic species/habitat/ cultural significance etc.	
Action required	
Tree removal process council/contractor	
Customer notified verbally & letter	

Approval Process

Overseer's Name: _____

Overseer's Signature: _____ **Date:** __/__/__

Manager's Name: _____

Manager's Signature: _____ **Date:** __/__/__

APPENDIX 6 - Street Tree Removal/Lopping Application



Street Tree Removal / Lopping Application for Towns and Villages

APPLICATION DETAILS

Full Name of Applicant _____
Address of Property _____
Telephone No _____

SUBJECT PREMISES – Property Description

Lot / Portion	_____	Section / DP	_____
Street No	_____	Locality	_____
Street	_____	Parish	_____
Assessment No	_____		

Description of Tree Species to be removed / topped:

The reason and justification for the removal / lopping is:

The number of trees to be removed / lopped:

The number and type of trees that will be planted as replacements:

Any specific requirements of the application:

This order applies to all land within the Local Government area of Gunnedah Shire Council.

APPLICANT'S SIGNATURE _____
DATE _____