NORTHERN MIDLANDS COUNCIL

Longford

Main Street – Tree Planting Report

Prepared by: Wayne Chellis

November 2017

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1 Introduction & Background

A Council report was presented to the Council Meeting on 23 January 2017, at which time it was the decision of Council to engage a suitably qualified person to undertake a survey and provide a report on future tree plantings in the Main Streets of Northern Midlands townships.

The author, who has been responsible for the planning and planting of street trees for a number of years, was appointed to undertake this project. Mr Leon Lange of Lange Design, Landscape Architects, has also been engaged to work with the author to achieve the best outcomes.

The report criteria included identification of existing infrastructure and services which may restrict the future planting of trees and available space to plant additional trees in accordance with the tree planting strategy.

2 Tree Planting Strategy, Tree Selection and Services

A tree planting strategy was identified in the 23 January 2017 report to Council.

Trees are considered to be a valued part of our streetscape, adding value to properties as well as breaking up the line of the built environment, helping it blend with the surrounding landscape.

There is not a perfect or ideal street tree; however, the writer has selected the most suitable tree to be planted in each location.

There has been a change in attitude since the 1970's where Council Officers selected trees that were guaranteed to grow once planted in the ground, this often resulted in problems developing at a later day and, on occasion, in litigation due to problems with buildings and Council's infrastructure.

A number of factors have to be taken into consideration when planting trees in the Northern Midlands, including the following:

2.1 Tree Grates & Guards

In 2010, under the direction of Council officers, designs and castings were constructed for the planting of street trees in sealed road verges and footpaths, prior to that time Tasmanian Councils sourced their tree grates and guards from mainland Australia.

The concrete surrounds have been designed to fit on the top of a cast in-situ concrete root barrier which is installed to increase the visual amenity, protect the trees from vehicle damage and support the tree guard, with steel formwork fabricated to bolt onto the concrete surround to hold the tree guard in place.

The concrete surrounds are predominately used in sealed parking areas and wide grass verges mowed with Council's ride-on mower.

Grates are installed within the footpath e.g. Longford CBD, in areas of increased pedestrian usage.

2.2 Watering of Trees in the CBD

New trees planted are watered by hand at least once per week in peak summer period for the first three years and the time period lengthens as the trees become established.

2.3 Maintenance

Trees are an asset that requires regular and ongoing maintenance and with an enormous amount of work involved in the maintenance which is necessary for the health of the trees and safety of the public. It is therefore crucial that the right tree is chosen in relation to its location to minimise the amount of labour required.

Large trees need to be pruned every two years at a cost of in excess of $1,000 per tree. Pruning consists of selective crown work, deadwood removal and lower branches need to be pruned to allow pedestrian access, cars to park and provide an uninterrupted sight line.

In accordance with tree planting guidelines Council's insurers require root barriers to be installed to ensure root growth does not cause damage (tripping points) in footpaths which may result in a future public liability claim.

The purpose of installing root barriers is to direct the roots downwards instead of outwards. Unfortunately, this directs the roots into the clay which sometimes prevents growth if the barriers are installed too deep and may even cause the tree to die as the trees become established.

Street trees e.g. Dutch Elm trees (at Ross), which were previously planted under power lines required hard pruning which was necessary on a regular basis. On these old pollards decayed sections develop and promotes new growth, both of foliage and roots. Growth of the roots often results in damage to Council's infrastructure, including footpaths, kerb & gutter and roadways, as well as neighbouring property damage.

2.4 Clearance Zones

In addition to the three-metre clearance zones, trees planted in narrow nature strips need to be clear stemmed up to a height of 1.8 metres to provide adequate site distance for property owners to access the road from their driveways.

2.4.1 Tas Networks

On one side of the street in most Northern Midlands Towns four uninsulated high-voltage wires are located at a height of approximately seven to eight metres, an additional four uninsulated low-voltage wires are located on a wide crossbar at a height of 5 metres or lower and separate single uninsulated street light service lines are also present.

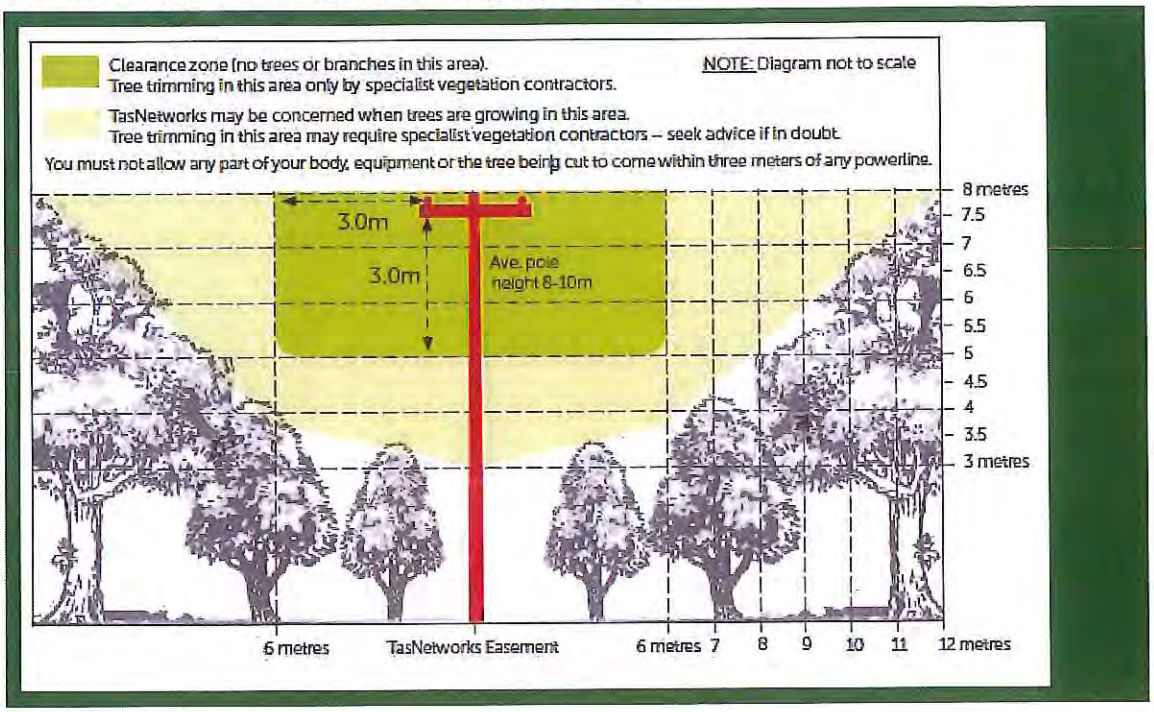
Bundling Cables

It should be noted that in many situations where uninsulated (bare wires) exist, bundled cables may need to be installed in the future at Council's cost.

Tas Networks will replace the four lower low voltage cables with an insulated bundled cable and relocated to a height of approximately seven metres in which case a one metre clearance is required; however, it should be noted that a three-metre clearance is still required from the high-voltage wires installed at a height of eight to ten metres.

Without bundling the cables prior to planting of trees or having a plan to bundle the cables within say two years, trees should not be planted under low-voltage wires unless there is a plan in place to maintain the trees to a satisfactory height.

The following illustration of clearance zones is provided on Tas Networks' website, unfortunately the diagram provided is not to scale and does not accurately reflect the height and number of wires that exist on the majority of the poles.



2.4.2 *Underground Services*

Underground power has only been installed in the Main Street of Ross and in new subdivisions; however, the following is noted in this regard: underground power has a cable exclusion zone, being one-metre either side, plus an additional one metre hazard zone.

Water, sewer, stormwater and Telstra services are also located in these narrow nature strips.

If guidelines and recommended distances from services are adhered to it is almost impossible to plant trees in many of the narrower nature strips (including new subdivisions) which are often not of sufficient width.

2.5 *Environmental Conditions*

In addition to factors such as maintenance and clearance zones, trees planted in the Northern Midlands area are subject to the following identified environmental conditions.

- Ground conditions become compacted preventing water flowing to the roots.
- Generally, particularly to the south of the municipal area, weather conditions in the Midlands can be extreme ranging from below zero degrees in winter to 35 degrees in summer. During the summer period low levels of rainfall occurs across the Northern Midlands and trees that do not have a watering system suffer and sometimes die. Council's workforce hand water trees that are planted in main streets for two to three years after planting.
- Trees need to be non-toxic, non-allergenic and should not have fruit that may be hazardous to persons accessing infrastructure.

3 Existing Tree Plantings

3.1 Wellington Street – Union Street to Archer Street

In 2011 *Blood Good Plane* trees planted in 1999 were removed and replaced with *Pyrus Capital* (Ornamental Pear) trees in the wide verge (parking area) on both sides of the street between Union and Archer Street.

At that time Council's outdoor works staff adopted a new method of protecting trees from traffic and pedestrians planted in sealed road verges, utilising tree grates and guards, as described in 2.1 above.

3.2 Marlborough Street – William Street to High Street (Western Side)

A 1999 Council planning application was lodged to plant trees in the parking area at this location. At the time, concerns were raised by local shop owners and residents regarding the loss of parking and ultimately the application was refused.

In order to improve the amenity of the CBD, *Pyrus Capital* (Ornamental Pear) trees were planted in the footpath on the western side in 2013. At the time of planting, trees were protected by specially designed guards/grates, as described in 2.1 above.

3.3 Marlborough Street – William Street to High Street (Eastern Side)

In 2014 *Pyrus Capital* (Ornamental Pear) trees were also planted on the eastern side of the street within the footpath.

3.4 Tannery Road – JBS Longford Meatworks to Railway Line

In 2015 Elm trees which had been severely cut back from the hydro wires by Hydro Services were removed and replaced with *Pyrus Capital* (Ornamental Pear) trees which were planted on the inside of the post and rail fence.

3.5 Wellington Street – Railway Line to Union Street

In 2015 *Pyrus Capital* (Ornamental Pear) trees were planted in the section between the kerb and the footpath on both side of the street, replacing the *Malus Ionesis* (Crab Apple) trees which had been planted in approximately 1990.

4 Alignment for Planting of Trees

4.1 Marlborough Street High Street to Lewis Street (Eastern Side)

The only available alignment to plant trees on the eastern side of Marlborough Street (from High Street to Lewis Street) is the sealed parking area at the frontage of the properties.

In order to maintain an acceptable distance from the existing water main, it is proposed that the trees be planted 1,650mm from the concrete gutter in which case the outer edge of the raised precast concrete surround would be located at a distance of 400mm, offset from the concrete channel.

4.2 Marlborough Street High Street to Lewis Street (Western side)

Trees could be planted in the shale area between the kerb and gutter and footpath; however, the existing high voltage power lines would restrict the species of tree to a small growing tree which would not significantly enhance the amenity of the street.

It is therefore suggested that the trees be planted in the parking area 1,250 metres from the concrete channel or up to 150mm closer by placing a 100mm or 150mm block out in the fibre glass mould to enable the concrete surround to be placed closer to the kerb and gutter, the trees would thus be further away from the passing traffic.

5 Approval Required for Planting Trees

5.1 State Growth

Council is responsible for the upgrading, maintenance and repairs to the parking areas and State Growth are responsible for the 7.4 metre carriageway; however, if asked, State Growth could request Council to seek planning approval in respect to the planting of trees or reject the proposal outright.

6 Tree Planting Species & Guidelines

6.1 Species & Genus

It is suggested that *Pyrus Capital* (Ornamental Pear) trees be planted on both sides of the street in Marlborough Street, between High Street and Lewis Street.

Trees purchased should be in 75 litre to 100 litre containers; the trees should have clean stems to a height of approximately 1.2 metres, this would ensure vision of motorists is not impaired when exiting driveways.

6.2 Planting Methodology

Council's *Tree Planting Strategy* states that trees planted in sealed verges shall have concrete surrounds placed on a concrete plinth and tree guards to protect the trees from parked and travelling vehicles.

New narrow and lower tree guards should be designed and fabricated to ensure vision is not impaired when motorists exit driveways. Tree guards are to be fixed to purpose mounted galvanised angle which is bolted across the concrete surround.

Plastic root barriers are to be placed on the kerb and gutter and carriageway side of the tree to prevent future pavement damage.

7 Suggested Specific Locations to Plant Tree (Eastern Side)

7.1 Marlborough Street High Street to Pultney Street (Eastern Side)

For the purpose of describing the location of each tree 0.0 is the northern boundary of No. 37 Marlborough Street.

It is proposed that *Pyrus Capital* trees be planted 1.650 metres from the edge of the concrete channel at chainage 0.033, 0.074, 0.103 and 0.138.

7.2 Marlborough Street – Pultney Street to Malcombe Street (Eastern Side)

For the purpose of describing the location of each tree 0.0 is the northern boundary of No. 51 Marlborough Street.

It is proposed that *Pyrus Capital* trees be planted 1.650 metres from the edge of the concrete channel at chainage 0.032, 0.059, 0.093 and 0.128.

7.3 Marlborough Street – Malcombe Street to Hobhouse Street (Eastern Side)

For the purpose of describing the location of each tree 0.0 is the Northern boundary of No. 75 Malcombe Street.

It is proposed that *Pyrus Capital* trees be planted 1.650 metres from the edge of the concrete channel at chainage 0.046, 0.089, 0.118 and 0.160.

7.4 Marlborough Street – Hobhouse Street to Bulwer Street (Eastern Side)

For the purpose of describing the location of each tree 0.0 is the northern boundary of the old galvanised custom orb showground shed in Marlborough Street.

It is proposed that *Pyrus Capital* trees be planted 1.650 metres from the edge of the concrete channel at chainage 0.030, 0.060, 0.090, 0.142 and 0.172.

7.5 Marlborough Street – Bulwer Street to Lewis Street (Eastern Side)

For the purpose of describing the location of each tree 0.0 is the side entry pit in close proximity to the fire hydrant in Marlborough Street.

It is proposed that *Pyrus Capital* trees be planted 1.650 metres from the edge of the concrete channel at chainage 0.034 and 0.077.

8 SUGGESTED SPECIFIC LOCATIONS TO PLANT TREES (WESTERN SIDE)

8.1 Marlborough Street – Lewis Street to Bulwer Street (Western Side)

For the purpose of describing the location of each tree 0.0 is the boundary between 122A and 122 in Marlborough Street.

It is proposed that *Pyrus Capital* trees be planted 1.100 to 1.250 metres from the edge of the concrete channel at only chainage 0.038 to avoid encroaching too close to the bus stop.

8.2 Marlborough Street – Bulwer Street to Hobhouse Street (Western Side)

For the purpose of describing the location of each tree 0.0 is the centre of the SMH manhole lid at the frontage of the letterbox at the Racecourse Inn in Marlborough Street.

It is proposed that *Pyrus Capital* trees be planted 1.100 to 1.250 metres from the edge of the concrete channel at chainage 0.038, 0.064, 0.097, 0.124 and 0.153.

8.3 Marlborough Street – Hobhouse Street to Malcombe Street (Western Side)

For the purpose of describing the location of each tree 0.0 is the SEP in Marlborough Street.

It is proposed that *Pyrus Capital* trees be planted 1.100 to 1.250 metres from the edge of the concrete channel at chainage 0.040, 0.060, 0.095 and 0.162.

8.4 Marlborough Street – Malcombe Street to Pultney Street (Western Side)

For the purpose of describing the location of each tree 0.0 is the Drill Hall's southern boundary.

It is proposed that *Pyrus Capital* trees be planted 1.100 metres to 1.250 metres from the edge of the concrete channel at chainage 0.031, 0.077, 0.123 and 0.171.

8.5 Marlborough Street – Pultney Street to High Street (Western Side)

For the purpose of describing the location of each tree 0.0 is the kerb line near the side entry pit in Pultney Street.

It is proposed that *Pyrus Capital* trees be planted 1.100 metres to 1.250 metres from the edge of the concrete channel at chainage 0.027, 0.060, 0.93 and 0.128.

9 LOCATION & COST

Priority	Location	Inclusions	Cost
1	High Street to Pultney Street (eastern side)	includes tree guards, concrete surrounds and concrete lintel	$16,000
2	Pultney Street to High Street (western side)	includes tree guards, concrete surrounds and concrete lintel	$16,000
3	Pultney Street to Malcombe Street (eastern side)	includes tree guards, concrete surrounds and concrete lintel	$16,000
4	Malcombe Street to Pultney Street (western side)	includes tree guards, concrete surrounds and concrete lintel	$16,000
5	Malcombe Street to Hobhouse Street (eastern side	includes tree guards, concrete surrounds and concrete lintel	$16,000
6	Hobhouse Street to Malcombe Street (western side)	includes tree guards, concrete surrounds and concrete lintel	$16,000
7	Hobhouse Street to Bulwer Street (eastern side)	includes tree guards, concrete surrounds and concrete lintel	$20,000
8	Bulwer Street to Hobhouse Street (western side)	includes tree guards, concrete surrounds and concrete lintel	$20,000
9	Bulwer Street to Lewis Street (eastern side)	includes tree guards, concrete surrounds and concrete lintel	$8,000
10	Lewis Street to Bulwer Street (western side)	includes tree guards, concrete surrounds and concrete lintel	$4,000

RECOMMENDATION

It is recommended that the trees, as suggested in this report, be planted in the order of priority as listed in the spreadsheet.

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Perth

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The report criteria included identification of existing infrastructure and services which may restrict the future planting of trees and available space to plant additional trees in accordance with the tree planting strategy.

Perth Main Street is considered to be a high priority due to the Perth Link Road (bypass) currently under construction, when completed, the bypass will enable the road carriage in the Main Street to be reduced in width, therefore providing space within the western parking area to plant trees.

2 Tree Planting Strategy, Tree Selection and Services

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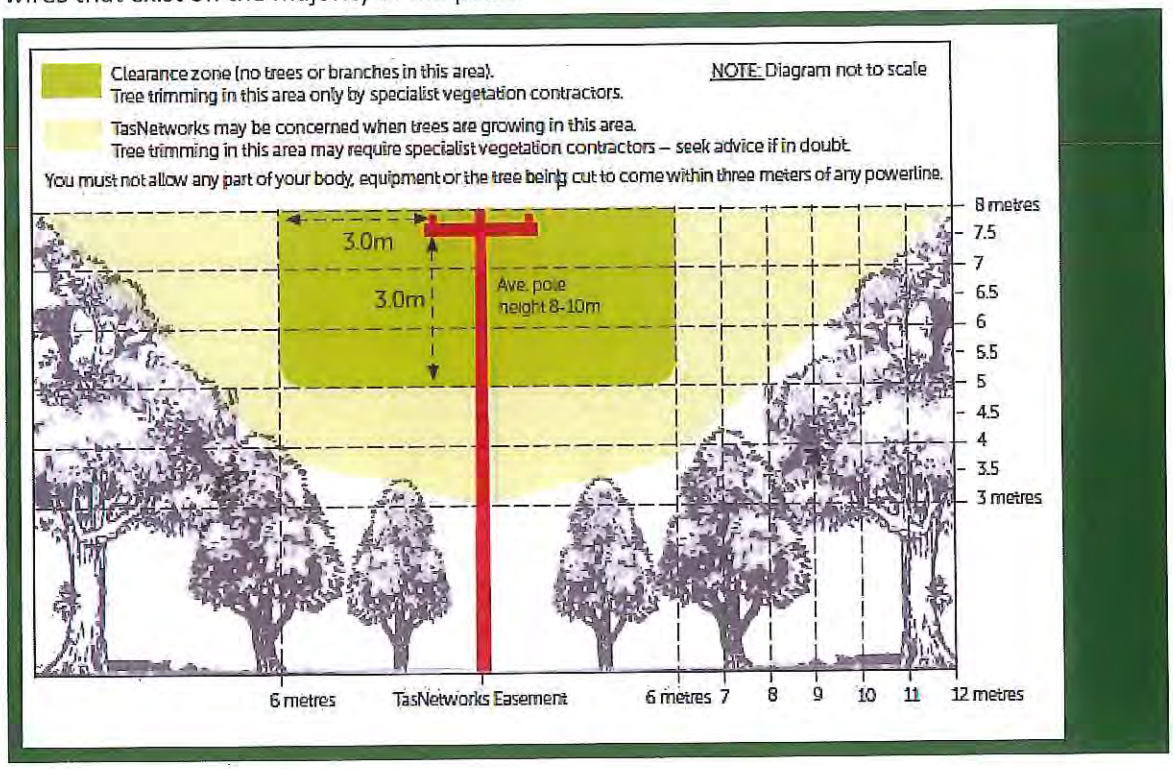

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not have a watering system suffer and sometimes die. Council's workforce hand water trees that are planted in main streets for two to three years after planting.

- Trees need to be non-toxic, non-allergenic and should not have fruit that may be hazardous to persons accessing infrastructure.

3 Existing Tree Plantings

3.1 Arthur Street to Phillip Street (Eastern Side)

In 2010 the reconstruction of the parking lane and construction of a kerb and gutter was undertaken to improve the northern entrance to Perth.

Following that 13 *Acer Fairview Flame* (Maple) trees were planted within concrete surrounds as part of the landscaping of the wide nature strip.

Acer Fairview Flame (Maple) trees

An automatic watering system was installed behind the kerb and in conduits placed under the driveway prior to concreting the driveways to water the nature strip and trees. Petunias were planted around the trees until the tree root growth expanded inside the concrete surrounds, i.e. for the first two years after tree planting.

The kerb and gutter alignment was diverted around the two Dutch Elm trees (which may have been planted as a war memorial) to provide an outstand in close proximity to the southern bound lanes.

3.2 Phillip Street to Railway Line (Western Side)

In 2014 a new kerb and gutter was constructed and stormwater pipes were installed to improve the disposal of stormwater off the western side of the Midland Highway into the open drain alongside the railway line.

Following that 4 *Pyrus Capital* trees were planted in the confined space between the services where an old footpath existed which serviced the Roadhouse which was closed a number of years ago.

3.3 Mary Street to Frederick Street (Eastern Side)

Sometime prior to 1980 *Crataegus* (type of Hawthorn) trees and *Malus* (Crab Apple) trees were planted in the nature strip on the eastern side nature strip.

In 2015 following complaints of *Malus* crab apples continuously dropping fruit onto the footpath and making it slippery approximately every second tree was removed and replaced with *Pyrus Capital* (Ornamental Pears).

Both tree species planted in this section need to be crown pruned and shaped by Council's tree specialist contractors on an annual basis to ensure they are kept clear of the low street light wires.

3.4 Frederick Street to Scone Street

In 2010 seven *Malus Tschonoskii* trees were planted at the frontage of the War Memorial and three *Prunus Fruticosa Globosa* (designer cherry) were planted in the asphalt footpath on the western side opposite the War Memorial.

Tree guards and grates were installed on top of a concrete lintel which acts as root barrier and supports the grate to protect the trees and the asphalt footpath.

3.5 Talisker to Drummond Street

In 2006 the parking lanes, kerb and gutter and footpaths were reconstructed on both sides of the street.

Following that *Pyrus Capital, Malus Tschonoskii* and *Smaragt Thuja Oxidentalis Conifers* were planted on the western side of the street between the back of the footpath and property boundaries.

3.6 Drummond Street to Old Bridge Road

In 2003 *Prunus Kanzan* trees were planted on the grass slope south of 95 Main Street on the eastern side following the reconstruction of Old Bridge Road.

Seven *Pyrus Capital* trees were recently planted on the western side, south of the Perth Road House.

4 Existing Road Width & Alignment

4.1 Arthur Street to Phillip Street

The existing and future road alignment is determined by the location of the two existing Elm trees which are protected by a concrete outstand and appropriate signage located in close proximity to the edge o

f the eastern carriageway, i.e. south bound lane.

The carriageway at Arthur Street junction includes a passing lane to cater for northbound traffic, therefore the existing overall road width does not make provision for the planting of trees on the western verge at that particular location.

4.2 Mary Street to Frederick Street

Overall sealed road consists of a 3 metre wide eastern parking area, 7.4 metre wide carriageway and 1.7 metre to 2 metre wide western side which is of insufficient width to park vehicles or plant trees.

5 Proposed Future Alteration to Road Carriageway

5.1 Arthur Street to Phillip Street

It appears that following the diversion of the majority of the traffic onto the new highway that the passing lane on the Midland Highway at Arthur Street will no longer be required.

Therefore, it is suggested that parking verge reconstruction should be carried out and white lines at that location need to be adjusted to allow for a 2.9 metre sealed verge that provides for trees to be planted on the western side from Arthur Street to Phillip Street.

A deep open drain currently exists in close proximity to the fence from number 22 Main Street to distribute the stormwater off that section of Main Street to Youl Road.

It is therefore suggested that a kerb and gutter be constructed as a minimum from number 22 to the existing storm water pipe which crosses Main Street on the southern side of Arthur Street. This would provide for an edge to the proposed road alterations and enable the existing drain to be filled in and levelled out up to the fence line.

See Appendix 1 – Site Plans.

5.2 Mary (Elizabeth) Street to Frederick Street

Unfortunately, the road has a steep cross fall at this location in particular on the Mary Street end and the road pavement is considered to be in poor condition.

This should therefore be discussed with State Growth during the hand-over discussions and consideration should be given to reconstructing and reducing the height of the crown prior to the planting of trees.

The existing road between kerbs is of sufficient width to plant trees on the western side if the following alteration is carried out:

- reduce the eastern parking area to 2.5 metres; and
- reduce the carriageway to 6.5 metres

this will provide a wider 2.9 metre parking area required to install the raised precast concrete surrounds and grates which protect the trees.

See Appendix 2 – Site Plans.

6 Concern with Water Main Location

6.1 Mary (Elizabeth) Street to Frederick Street

Unfortunately, the water main is located in the centre of the western parking area from Mary Street to Frederick Street where it is suggested trees be planted.

Due to the significant improvement, tree planting at that particular location will contribute to the visual amenity of Peth Main Street. It is believed that the extra cost of splitting a larger pipe to install as a conduit around the water main to act as a root barrier alongside each tree should be considered.

7 Concern with Redline Bus Parking North of Frederick Street (Western Side)

7.1 Previous Concern

Council and the owner of the business of Exclusive Cars were previously concerned regarding the Red Line bus stopping at the frontage of the business to convey schoolchildren in a northerly direction each morning.

The site distance of drivers crossing or entering Main Street from Frederick Street (western side of Main Street) was eliminated during the time that the bus was parked.

It was Council's view that the Redline bus should have transported children from the designated bus stop which is utilised by the Metro Service, located in Scone Street.

7.2 Action Taken by Redline Coach's Manager to Address Safety Concern

Redline Managers believed it was too dangerous to pull out onto Main Street from Frederick Street via Scone Street each morning during peak traffic, therefore commenced transporting schoolchildren from further north of Excusive Cars at the frontage of a heritage listed house built close to the front property boundary.

The owner of the property raised concerns during the road inspection which was carried out for the purpose of providing this report.

7.3 Suggested Future Action by Council

Prior to the completion of the bypass it is suggested that Council include in hand-over discussions with State Growth, the enforcement of the Scone Street bus stop to transport school children travelling north by the Redline Bus Service.

The reasons given by the Manager of Redline Bus Service for not entering the Main Street from Frederick Street via Scone Street will no longer have validity given the reduction in traffic.

8 Suggested Future Tree Planting

8.1 Arthur Street to Phillip Street (Western Side)

Once Council is responsible for Perth Main Street and altering the roadway as suggested in this report, it is proposed that trees be planted in the following proposed locations.

Chainage 0.0, 0.029, 0.058, 0. 087, 0.108, 0.130, 0.151, 0.173, 0.194, 0.216.

For the purpose of describing the location of each tree chainage 0.0 is directly opposite the most southern Dutch Elm tree planted within the concrete outstand.

It is proposed that 10 trees be planted from chainage 0.0 to the north up to Arthur Street, and possibly to the Youl Road junction subject to the road design at that location.

Trees are proposed to be planted in concrete surrounds (with grates and guards) placed alongside the new kerb and gutter (refer above *5.1 Arthur to Phillip Street*).

8.1.1 Type of Tree

Tree height will not be restricted as there are no power wires on the western side of the Street.

The width of the trees proposed to be planted alongside the road carriageway is a maximum of 3 metres when fully grown (approximately ten years). Sufficient width will not be available on the sealed verge to plant the same species as that planted in the grass verge on the eastern side; however, there will be sufficient width to plant the *genus Acer Platanoides Columnare* in concrete surrounds.

This species grows to a height of 10 metres and width of 4 metres. The lower limbs of the trees would need to be pruned to allow motorists travelling on Perth Main Street adequate visibility.

8.2 Mary Street to King Street (Western Side)

For the purpose of describing the location of each tree chainage 0.0 is the kerb alignment in Mary Street at the pram crossing.

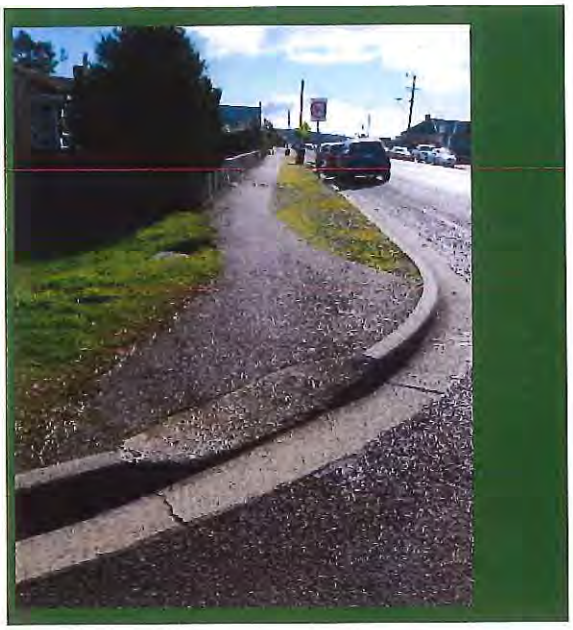
It is proposed that *Pyrus Capital* (Ornamental Pears) trees be planted in concrete surrounds and tree guards at chainages 0.026, 0.053 and 0.085 (refer above *6.1 Mary (Elizabeth) Street to Frederick Street*).

8.3 King Street to Frederick Street (Western Side)

For the purpose of describing the location of each tree chainage 0.0 is the kerb alignment in King Street.

It is proposed that *Pyrus Capital* (Ornamental Pears) trees be planted in concrete surrounds and tree guards at chainages 0.015, 0.037, 0.057, 0.077, 0.098, 0.119, 0.138, 0.156 and 0.181.

8.4 Talisker Street to Scone Street (Western Side)



For the purpose of describing the location of each tree on the western side chainage 0.0 is the pram crossing in Talisker Street.

It is proposed that *Prunus Fruticosa Globosa* (Flowering Cherry) designer trees be planted in the gravel section between the kerb and the footpath approximately 1.1 metres from the concrete kerb.

Trees to be planted and protected by grates supported by a concrete root barrier form work and surrounded by tree guards like the ones opposite the War Memorial at chainages 0.016, 0.025 and 0.047.

8.5 Talisker Street to Scone Street (Eastern Side)

For the purpose of describing the location of each tree chainage 0.0 is the southern end of the brick fence at the frontage of the Post Office.

It is proposed that *Prunus Fruticosa Globosa* (Flowering Cherry) designer trees be planted in the asphalt sealed footpath approximately 1.3 metres from the concrete kerb.

Trees to be planted and protected by tree grates supported by a concrete root barrier form work and surrounded by tree guards at chainages 0.00, 0.029, 0.040, 0.062 and 0.091.

8.6 Old Punt Road to Old Bridge Road (Eastern Side)

For the purpose of describing the location of each tree chainage 0.0 is the northern side of the asphalt sealed entrance servicing 95 Main Street and trees should be planted at chainages 0.009, 0.025, 0.040, 0.057, 0.078, 0.094 and 0. 114.

It is proposed that Standard Evergreen Magnolia Exmouth trees be planted in the 4 metre wide gravel section between the sealed road and the asphalt footpath, approximately 2 metres from the footpath. In the event that these trees are not available, *Acer Platanoides Globosum* would be suitable.

A section of the gravel shoulder in this area is steep and the trees may not obtain sufficient water, therefore it is proposed that trees be planted in a hole approximately 1.2 metres square x 450mm deep; with a 200mm wide x 300mm deep reinforced in-situ concrete plinth on the outside to finish level with the gravel surface to allow water to enter the tree roots. Koppers mulch to be placed on the topsoil following planting and tree guards to be fixed with short star droppers.

The two-coat seal at this location should to be cut back in a straight line to the road edge and filled with iron stone gravel. Another option is to install a dry concrete kerb alongside the sealed road edge.

9 Suggested Future Shrub Planting - Locations

9.1 Talisker to Clarence Street (Eastern Side)

Verandas overhang the footpath in the central CBD area and the parking area at the frontage of businesses is considered to be of utmost importance, therefore trees should not be placed within the parking verge.

Space is available for plantings from the frontage of number 79 to the bus stop; however, planting of trees would prevent signage from being seen by commuters travelling south. Further, trees planted between the bus stop and Clarence Street would restrict the vision of drivers entering Main Street from Clarence Street.

It is therefore suggested that low shrubs e.g. *Hebe* (hybrid *Heebie Jeebies*) be planted in the shale behind the kerb from number 79 to Clarence Street to provide some colour.

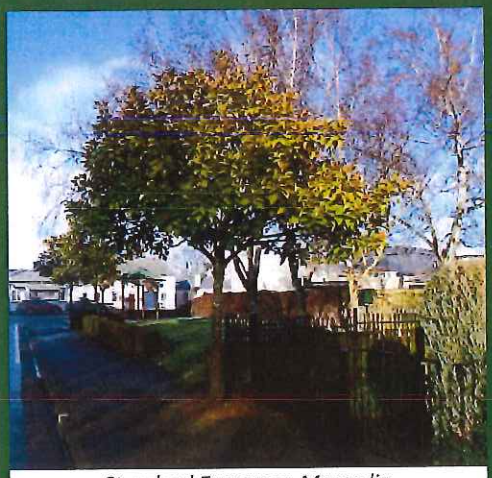
10 Suggested Species to be Planted

Pyrus Capital
Proposed planting – Mary to Frederick Street

Prunus Fruticosa Globosa
(Flowering Cherry)
Proposed planting – Scone to Talisker Street

Acer Platanoides Columnare
Alternative option - Arthur to Phillip Street

Acer Platanoides Globosum



Standard Evergreen Magnolia
Proposed planting – Old Punt to Old Bridge Road

Hebe (Proposed planting
79 Main to Clarence Street)

11 Consultation with Property Owners

Planting of trees in Perth's Main Street should have no negative effect on the property owners, therefore, Council should engage in consultation prior to planting and ensure the trees do not substantially reduce the sight distance of property owners entering Main Street.

12 Total Cost of Planting Trees

The total cost of planting advanced trees at all locations, inclusive of tree guards, grates, concrete surrounds, concrete plinths and *fytocell* soil improver is $164,000.

Recommendation

It is recommended that council discuss items 1, 2, and 3 below with State Growth, discussion in regard to items 2 and 3 for the purpose of seeking funding prior to agreeing to become responsible for Perth Main Street Carriageway.

a) Enforce the use of the bus stop and shelter in Scone Street by Redline Bus Service and other services.

b) Extend the kerb & gutter and construct a short section of road from No. 22 Main Street to Arthur Street. Reconfigure the white lines on Main Street, at Arthur Street Junction (removing the highlighted passing lane) to provide for a 2.9 metre sealed western verge for the purpose of planting trees.

c) Reconstruct Main Street from Mary Street to Frederick Street and reconfigure the white lines.

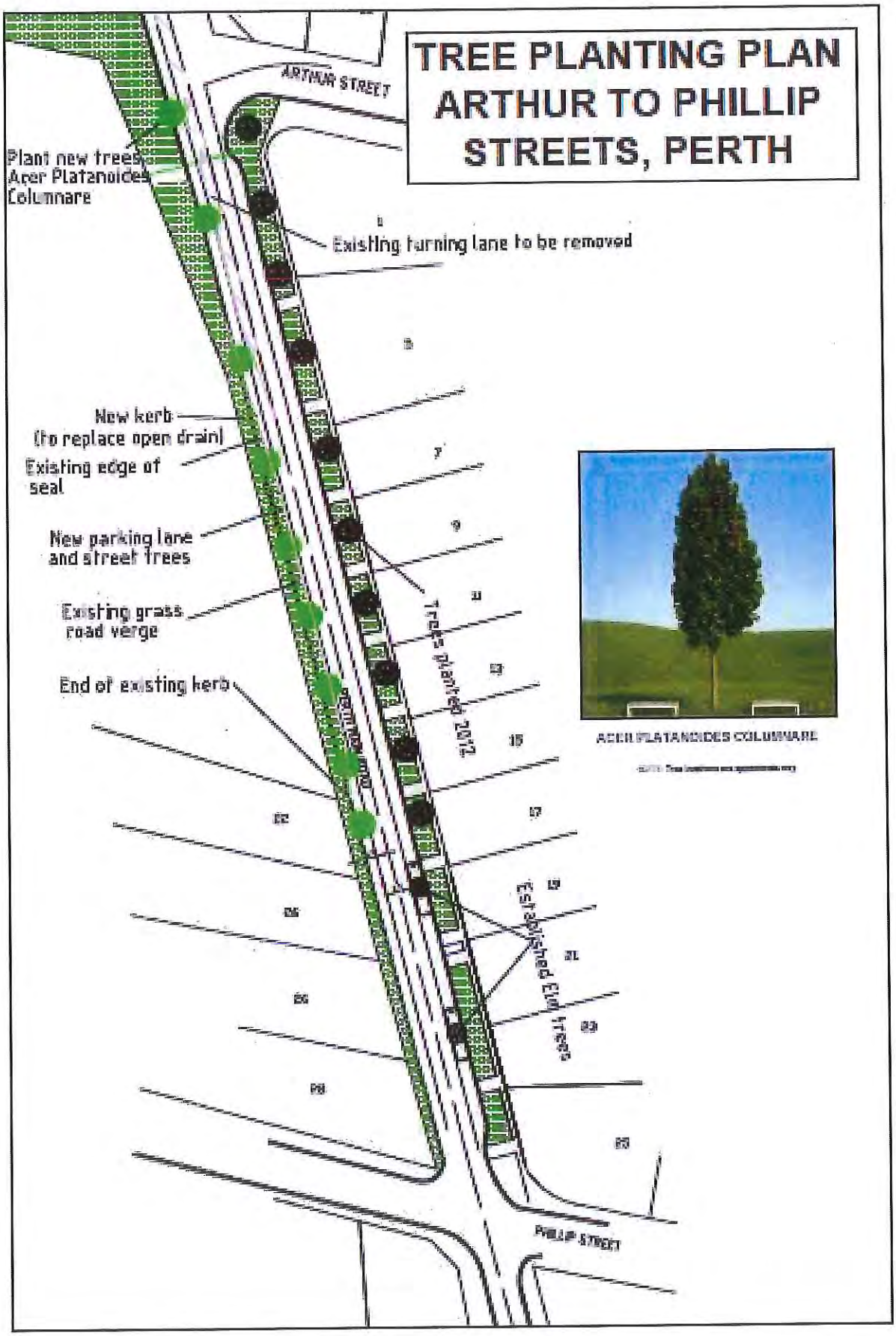
d) Once ownership of Perth Main Street is relinquished by the Department of State Growth, undertake construction/changes and tree planting as suggested within this report, be planted in the following order of priority:

Priority	Location	Inclusions	Cost
1	Arthur Street to Phillip Street (western side), after road alterations – plant 10 trees as mentioned in item 8.1	includes tree guards, concrete surrounds, concrete lintel and root barriers.	$40,000
2	Mary Street to King Street (western side), after road alterations – plant 3 trees as mentioned in item 8.2	includes tree guards, concrete surrounds, concrete lintel and conduits around water main.	$15,000
3	King Street to Frederick Street (western side), after road alterations – plant 9 trees as mentioned in item 8.3	includes tree guards, concrete surrounds, concrete lintel and conduits around water main.	$45,000
4	Talisker Street to Scone Street (western side) - plant 3 trees as mentioned in item 8.4	includes tree guards, steel grates, concrete lintels and root barriers.	$12,000
5	Talisker Street to Scone Street (eastern side) – plant 5 trees as mentioned in item 8.5	includes tree guards, steel grates , concrete lintels and root barriers.	$20,000
6	Old Punt Road to Old Bridge Road (eastern side) – plant 7 trees as mentioned item 8.6	includes tree guards, concrete surrounds, concrete lintel and root barriers	$28,000
7	Talisker Street to Clarence Street (eastern side) – landscaping and planting Hebe as mentioned in item 9.1	Topping up shale.	$4,000
8		**Total Cost**	**$164,000**

APPENDIX 1:

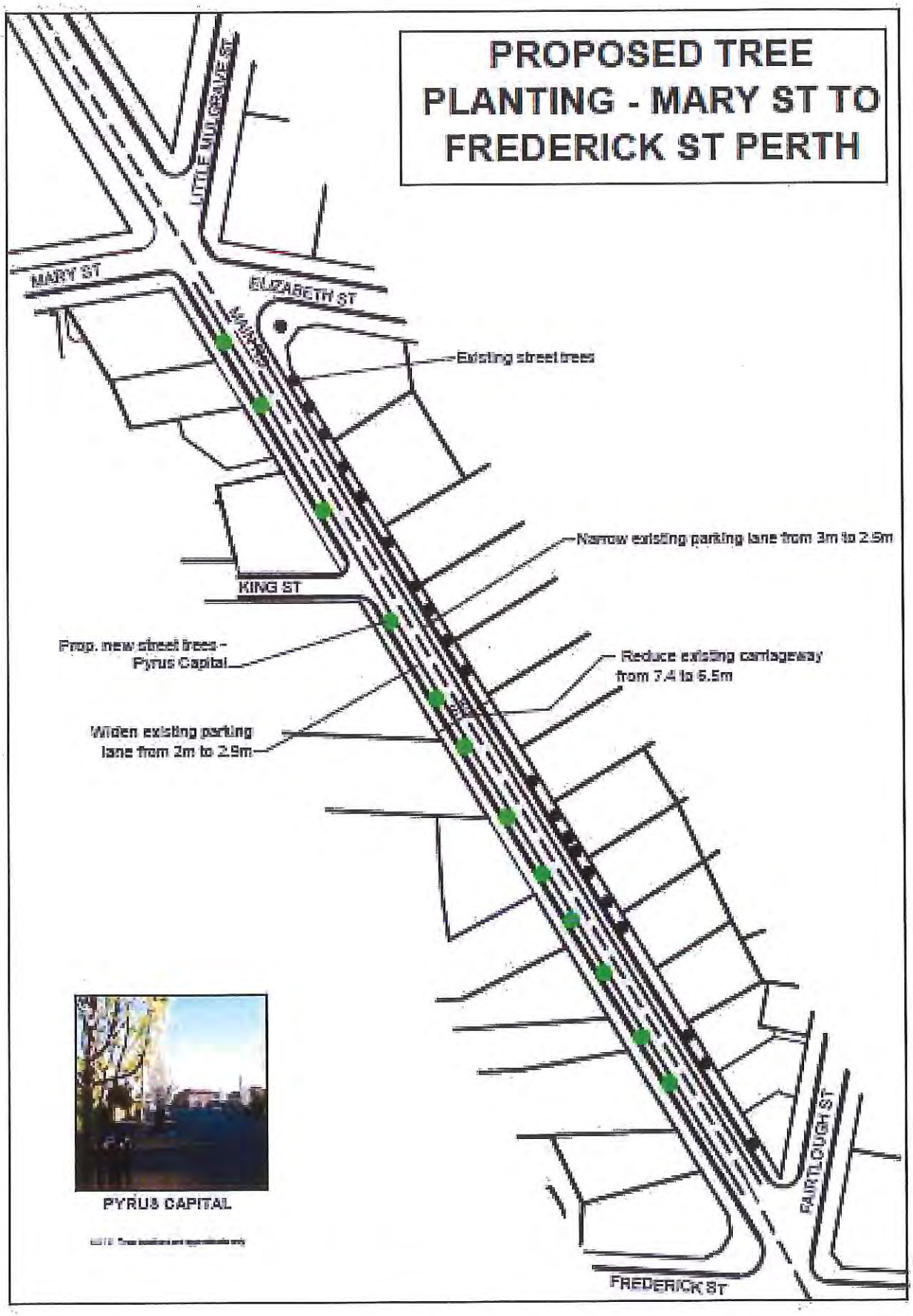
PROPOSED FUTURE ALTERATION TO ROAD CARRIAGEWAY

ARTHUR STREET TO PHILLIP STREET



APPENDIX 2:

PROPOSED FUTURE ALTERATION TO ROAD CARRIAGEWAY MARY (ELIZABETH) STREET TO FREDERICK STREET



NORTHERN MIDLANDS COUNCIL

Ross

Main Street – Tree Planting Report

Prepared by: Wayne Chellis

January 2018

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1 Introduction & Background

A Council report was presented to the Council Meeting on 23 January 2017, at which time it was the decision of Council to engage a suitably qualified person to undertake a survey and provide a report on future tree plantings in the Main Streets of Northern Midlands townships.

The author, who has been responsible for the planning and planting of street trees for a number of years, was appointed to undertake this project. Mr Leon Lange of Lange Design, Landscape Architects, has also been engaged to work with the author to achieve the best outcomes.

The report criteria included identification of existing infrastructure and services which may restrict the future planting of trees and available space to plant additional trees in accordance with the tree planting strategy.

2 Tree Planting Strategy, Tree Selection and Services

A tree planting strategy was identified in the 23 January 2017 report to Council.

Trees are considered to be a valued part of our streetscape, adding value to properties as well as breaking up the line of the built environment, helping it blend with the surrounding landscape.

There is not a perfect or ideal street tree; however, the writer has selected the most suitable tree to be planted in each location.

There has been a change in attitude since the 1970's where Council Officers selected trees that were guaranteed to grow once planted in the ground, this often resulted in problems developing at a later day and, on occasion, in litigation due to problems with buildings and Council's infrastructure.

A number of factors have to be taken into consideration when planting trees in the Northern Midlands, including the following:

2.1 Tree Grates & Guards

In 2010, under the direction of Council officers, designs and castings were constructed for the planting of street trees in sealed road verges and footpaths, prior to that time Tasmanian Councils sourced their tree grates and guards from mainland Australia.

The concrete surrounds have been designed to fit on the top of a cast in-situ concrete root barrier which is installed to increase the visual amenity, protect the trees from vehicle damage and support the tree guard, with steel formwork fabricated to bolt onto the concrete surround to hold the tree guard in place.

The concrete surrounds are predominately used in sealed parking areas and wide grass verges mowed with Council's ride-on mower.

Grates are installed within the footpath e.g. Longford CBD, in areas of increased pedestrian usage.

2.2 Watering of Trees in the CBD

New trees planted are watered by hand at least once per week in peak summer period for the first three years and the time period lengthens as the trees become established.

2.3 Maintenance

Trees are an asset that requires regular and ongoing maintenance and with an enormous amount of work involved in the maintenance which is necessary for the health of the trees and safety of the public. It is therefore crucial that the right tree is chosen in relation to its location to minimise the amount of labour required.

Large trees need to be pruned every two years at a cost of in excess of $1,000 per tree. Pruning consists of selective crown work, deadwood removal and lower branches need to be pruned to allow pedestrian access, cars to park and provide an uninterrupted sight line.

In accordance with tree planting guidelines Council's insurers require root barriers to be installed to ensure root growth does not cause damage (tripping points) in footpaths which may result in a future public liability claim.

The purpose of installing root barriers is to direct the roots downwards instead of outwards. Unfortunately, this directs the roots into the clay which sometimes prevents growth if the barriers are installed too deep and may even cause the tree to die as the trees become established.

Street trees e.g. Dutch Elm trees (at Ross), which were previously planted under power lines required hard pruning which was necessary on a regular basis. On these old pollards decayed sections develop and promotes new growth, both of foliage and roots. Growth of the roots often results in damage to Council's infrastructure, including footpaths, kerb & gutter and roadways, as well as neighbouring property damage.

2.4 Clearance Zones

In addition to the three-metre clearance zones, trees planted in narrow nature strips need to be clear stemmed up to a height of 1.8 metres to provide adequate site distance for property owners to access the road from their driveways.

2.4.1 Tas Networks

On one side of the street in most Northern Midlands Towns four uninsulated high-voltage wires are located at a height of approximately seven to eight metres, an additional four uninsulated low-voltage wires are located on a wide crossbar at a height of 5 metres or lower and separate single uninsulated street light service lines are also present.

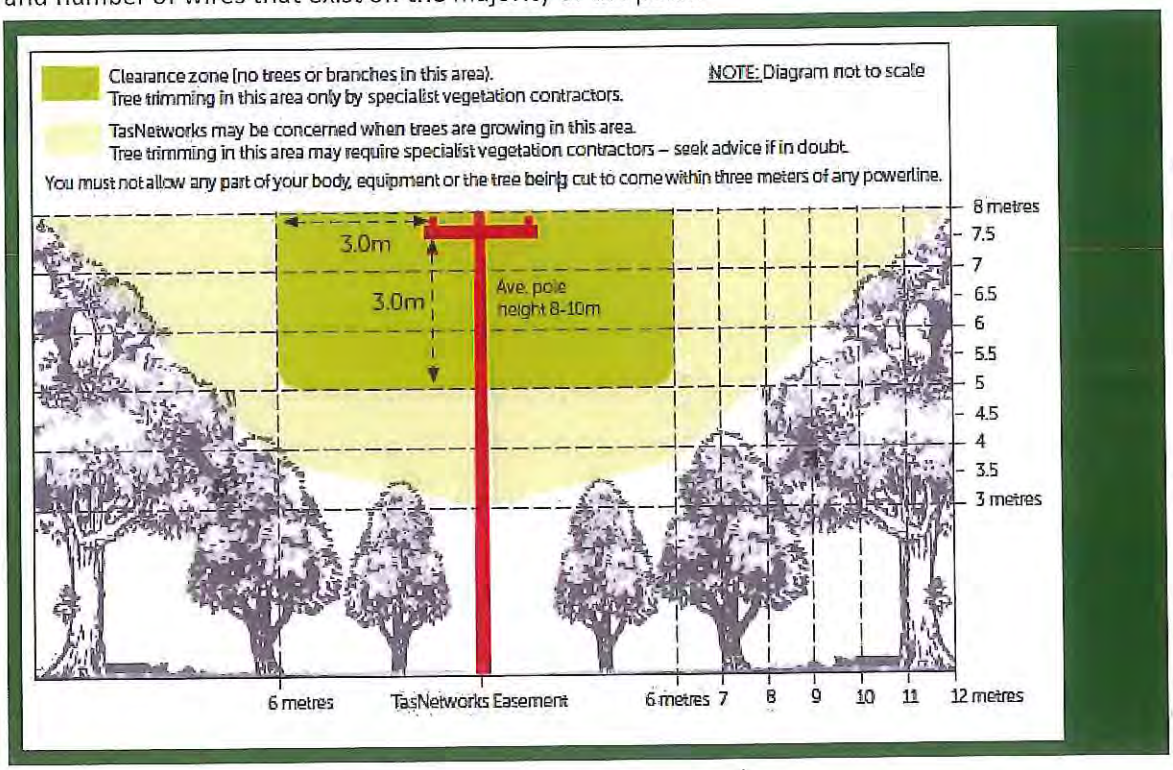
Bundling Cables

It should be noted that in many situations where uninsulated (bare wires) exist, bundled cables may need to be installed in the future at Council's cost.

Tas Networks will replace the four lower low voltage cables with an insulated bundled cable and relocated to a height of approximately seven metres in which case a one metre clearance is required; however, it should be noted that a three-metre clearance is still required from the high-voltage wires installed at a height of eight to ten metres.

Without bundling the cables prior to planting of trees or having a plan to bundle the cables within say two years, trees should not be planted under low-voltage wires unless there is a plan in place to maintain the trees to a satisfactory height.

The following illustration of clearance zones is provided on Tas Networks' website, unfortunately the diagram provided is not to scale and does not accurately reflect the height and number of wires that exist on the majority of the poles.



2.4.2 Underground Services

Underground power has only been installed in the Main Street of Ross and in new subdivisions; however, the following is noted in this regard: underground power has a cable exclusion zone, being one-metre either side, plus an additional one metre hazard zone.

Water, sewer, stormwater and Telstra services are also located in these narrow nature strips.

If guidelines and recommended distances from services are adhered to it is almost impossible to plant trees in many of the narrower nature strips (including new subdivisions) which are often not of sufficient width.

2.5 Environmental Conditions

In addition to factors such as maintenance and clearance zones, trees planted in the Northern Midlands area are subject to the following identified environmental conditions.

- Ground conditions become compacted preventing water flowing to the roots.
- Generally, particularly to the south of the municipal area, weather conditions in the Midlands can be extreme ranging from below zero degrees in winter to 35 degrees in summer. During the summer period low levels of rainfall occurs across the Northern Midlands and trees that do not have a watering system suffer and sometimes die. Council's workforce hand water trees that are planted in main streets for two to three years after planting.

- Trees need to be non-toxic, non-allergenic and should not have fruit that may be hazardous to persons accessing infrastructure.

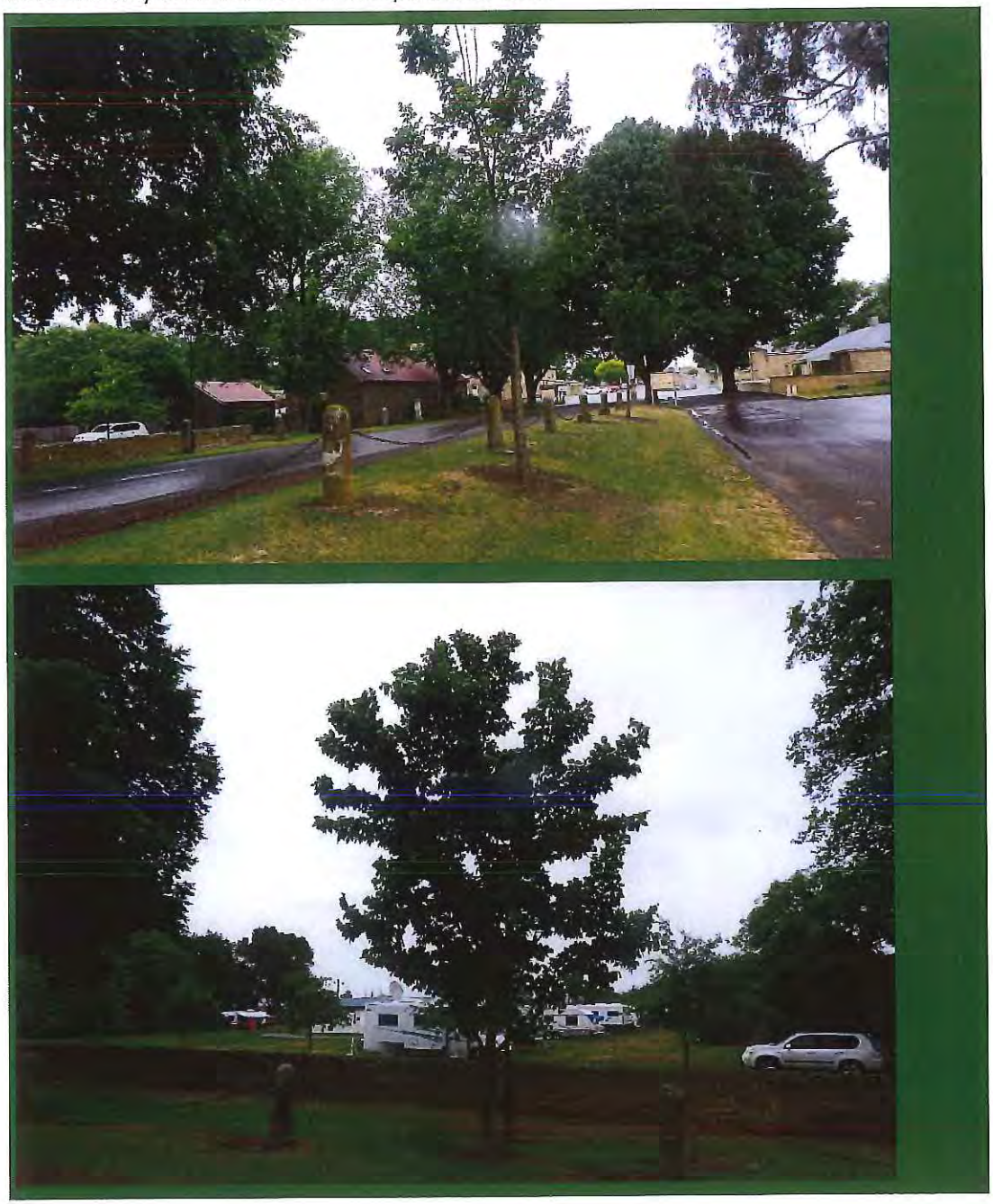
3 Existing Tree Plantings

3.1 Church Street and Bridge Street

Approximately 75 Dutch Elm trees were planted in Church Street and Bridge Street in the 1920's.

In approximately 2002 Council's outdoor employees removed 2 dead trees and planted 10 additional trees in gaps where it was believed that original trees were planted.

The replacement Dutch Elm trees were sourced from the Launceston City Council nursery, which were the only ones available at that particular time.



3.2 Chiswick Road Midland Highway to The Boulevards

In approximately 1994, 112 Golden Elm trees were planted in the road verge on both sides of Chiswick Road at the northern entrance to Ross.

These trees have done poorly, many have been replaced over time and a number of persons have expressed varying opinions as to why the trees have not grown as expected .

Some members of the Local District Committee believe the trees were getting insufficient water. It was expected that the soil at this location would be of a sandy composite; however, when holes were dug at various locations to plant new trees it was noted that the soil was clay based and was saturated. It took approximately two months for the holes to dry sufficiently to enable the trees to be replaced.

Advice was sought in relation to the condition of the trees from Council's contract tree arborist Gordon Paul who, upon inspection advised that

- unlike Dutch Elm trees, Golden Elm trees would not do well in that particular environment,
- after being planted for four years trees should not generally require watering; and
- the lack of water was not the problem.

4 Issues of Concern

4.1 Concerns

4.1.1 Tree pruning Prior to 1970

Prior to the 1970's, the Dutch Elm trees were pollarded which is a method of cutting off the branches almost to the main trunk to prevent the trees growing to the height of the power wires. No doubt this had an effect on the trees; however, it is surprising to see the trees in such good condition today.

4.1.2 Elm Leaf Beetle

Elm leaf beetle is a recently introduced pest in Tasmania with the first recorded siting in the Launceston area in 2002 and Hobart in 2008. Since that time, the beetle has become relatively common on a number of Elm trees throughout Tasmania.

The pest adult beetle and larvae feed on new emerging shoots and young leaves and in some cases has the potential to completely defoliate the tree, particularly young trees. In regard to Ross trees the beetle generally leaves a number of shot holes about one millimetre or more in diameter throughout the surface of the leaf which would impact the vigour of the trees if not treated.

4.2 Maintenance/Remedies

4.2.1 Pruning – Underground Power Installation

In the 1970's Ross Council installed the underground power supply in Church and Bridge streets, in conjunction with the sewerage main to service the township, this allowed the trees to grow to their full potential.

Pruning carried out by the Northern Midlands Council's contractors generally only involves crown pruning, tip pruning and removal of dead wood.

4.2.2 Treatment of Elm Leaf Beetle

Three different methods are generaly used by councils to treat and manage Elm leaf beetles as follows

- Trunk injection is a method performed by a suitably trained tree specialist and involves the injection of chemicals into the trunk of the tree. This particular treatment was carried out by a Tasmanian tree specialist in Ross a number of years ago, it was however unsuccessful.
- Spraying the entire tree with *Confidor* chemical at night is another treatment performed by some mainland councils; this is a high-risk operation which is not recommended
- Injecting the ground around the tree with chemicals is the method currently used by the Northern Midlands Council and the mainland contractors engaged by Council have had 100 percent success rate. Follow up inspections are undertaken, with a low number of trees being retreated where evidence of Elm Leaf beetle remains.

5 Future tree plantings in Ross Main Street

It has been determined that there is currently no requirement to plant additional trees in the main streets of Ross, namely Church Street and Bridge Street.

Recommendation

It is recommended that

a) That the current pruning regime in relation to the Dutch Elm trees in Church Street and Bridge Street Ross be maintained.

and

b) That subject to cost, the same contractors be engaged to treat the Elm Leaf Beetle in October or November every three years (three-year cycle).

STREET TREE PLANTING PROGRAM

Area	Location	Plantings/ Works	Inclusions	Document Reference	Cost
2018/2019					
Campbell Town	Grant Street to Pedder Street (eastern side)	4 x *Acer Scarlet Sentinel* trees	includes tree guards and concrete surrounds	Item 5.5	$12,000
Campbell Town	Esplanade to King Street (western side)	3 x *Pyrus Capital* (ornamental pear) trees + 2 x replacement trees	includes tree guards, concrete surrounds and concrete lintel	Item 5.6	$12,000 $8,000
Campbell Town	Montague Street to south (western side)	6 x *Pyrus Capital* (ornamental pear) trees	includes tree guards and concrete surrounds	Item 5.7	$18,000
Campbell Town	Montague Street Uniting Church cemetery to south (corner eastern side)	7 x *Acer Fairview Flame* trees	includes tree guards and concrete surrounds	Item 5.8	$21,000
Longford	High Street to Pultney Street (eastern side)	4 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds, concrete lintel and root barrier	Item 7.1	$16,000
Longford	Pultney Street to High Street (western side)	4 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds, concrete lintel and root barrier	Item 8.5	$16,000
			TOTAL COST 2018/2019		***$103,000***
2019/2020					
Avoca	St Paul's Place to Blenheim Street (northern side)	5 x *Pyrus Capital* (ornamental pear) trees	includes tree guards and concrete surrounds	Item 5.1	$15,000
Avoca	Blenheim Street to Arthur Street (northern side)	5 x *Pyrus Capital* (ornamental pear) trees	includes tree guards and root barriers	Item 5.2	$10,000
Avoca	Arthur Street to Gray Street (northern side)	5 x *Pyrus Capital* (ornamental pear) trees	includes tree guards and root barriers	Item 5.3	$10,000
Avoca	Gray Street to Churchill Street (northern side)	7 x *Pyrus Capital* (ornamental pear) trees	includes tree guards and concrete surrounds	Item 5.4	$21,000
Avoca	Blenheim Street to Arthur Street (southern side)	3 x *Prunus Oakville Crimson Spire* (ornamental plum) trees	includes tree guards and root barriers	Item 5.5	$6,000
Avoca	Arthur Street to Gray Street (southern side)	5 x *Prunus Oakville Crimson Spire* (ornamental plum) trees	includes tree guards and root barriers	Item 5.6	$10,000
Avoca	Gray Street to Churchill Street (southern side)	6 x *Prunus Oakville Crimson Spire* (ornamental plum) trees	includes tree guards and root barriers	Item 5.7	$12,000
Cressy	Northern end to Jetson Court	2 x High Standard *Magnolia Exmouth* or High Standard *Malus Ioensis* or *Prunus Oakville Crimson Spire* (ornamental plum) trees	includes tree guards and root barriers	Item 6.4, frontage of # 2 & 4	$4,000

Area	Location	Plantings/ Works	Inclusions	Document Reference	Cost
Cressy	King Street to Church Street	8 x High Standard *Magnolia Exmouth* or High Standard *Malus Ioensis* or *Prunus Oakville Crimson Spire* (ornamental plum) trees	includes tree guards and root barriers	Item 6.4, frontage of # 71, 77, 80, 82, 83, 84, 86 & 90	$16,000
Cressy	Saundridge Road to Stock Route	6 x High Standard *Magnolia Exmouth* or High Standard *Malus Ioensis* or *Prunus Oakville Crimson Spire* (ornamental plum) trees	includes tree guards and root barriers	Item 6.4, frontage of # 122, 126, 128, 129, 132 & 134	$12,000
			TOTAL COST 2019/2020		***$116,000***
2020/2021					
Perth	Arthur Street to Phillip Street (western side), after completion of road construction	10 x *Acer Platanoides Columnare* trees	includes tree guards, concrete surrounds, concrete lintel and root barriers	Item 8.1	$40,000
Perth	Mary Street to King Street (western side), after completion of road construction	3 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds, concrete lintel and conduits around water main	Item 8.2	$15,000
Perth	King Street to Frederick Street (western side), after completion of road construction	9 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds, concrete lintel and conduits around water main	Item 8.3	$45,000
Perth	Talisker Street to Scone Street (western side)	3 x *Prunus Fructicosa Globosa* (flowering cherry) trees	includes tree guards, steel grates, concrete lintels and root barriers	Item 8.4	$12,000
Perth	Talisker Street to Scone Street (eastern side)	5 x *Prunus Fructicosa Globosa* (flowering cherry) trees	includes tree guards, steel grates, concrete lintels and root barriers	Item 8.5	$20,000
Perth	Old Punt Road to Old Bridge Road (eastern side)	7 x *Magnolia Exmouth* or *Acer Platanoides Globosum*	includes tree guards, concrete surrounds, concrete lintel and root barriers	Item 8.6	$28,000
Perth	Talisker Street to Clarence Street (eastern side)	landscaping and planting of Hebe	landscaping and topping up of shale	Item 9.1	$4,000
			TOTAL COST 2020/2021		***$164,000***
2021/2022					
Longford	Pultney Street to Malcombe Street (eastern side)	4 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds and concrete lintel	Item 7.2	$16,000
Longford	Malcombe Street to Pultney Street (western side)	4 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds and concrete lintel	Item 8.4	$16,000
Longford	Malcombe Street to Hobhouse Street (eastern	4 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds and concrete lintel	Item 7.3	$16,000

Area	Location	Plantings/ Works	Inclusions	Document Reference	Cost
	side)				
Longford	Hobhouse Street to Malcombe Street (western side)	4 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds and concrete lintel	Item 8.3	$16,000
Longford	Hobhouse Street to Bulwer Street (eastern side)	5 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds and concrete lintel	Item 7.4	$20,000
Longford	Bulwer Street to Hobhouse Street (eastern side)	5 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds and concrete lintel	Item 8.2	$20,000
Longford	Bulwer Street to Lewis Street (eastern side)	2 x *Pyrus Capital* (ornamental pear) trees	includes tree guards, concrete surrounds and concrete lintel	Item 7.5	$8,000
Longford	Lewis Street to Bulwer Street (western side)	1 x *Pyrus Capital* (ornamental pear) tree	includes tree guards, concrete surrounds and concrete lintel	Item 8.1	$4,000
			TOTAL COST 2021/2022		***$116,000***
2022/2023					
Campbell Town	Pedder Street to 41 High Street (western side)	7 x *Acer Platanoides Crimson Sentry* trees	includes tree guards and concrete surrounds	Item 5.3	$22,400
Campbell Town	41 High Street to Grant Street (western side)	5 x *Pyrus Capital* (ornamental pear) trees	includes tree guards and concrete surrounds	Item 5.4	$16,000
Campbell Town	Church street to Bridge Street (western side)	10 x *Acer Platanoides Crimson Sentry* trees	includes tree guards and concrete surrounds *Note the bundling of cables is not included in this cost*	Item 5.1	$32,000
Campbell Town	Bridge Street to Pedder Street (western side)	11 x *Acer Platanoides Crimson Sentry* or *Prunus Oakville Crimson Spire* (ornamental plum) trees	includes tree guards and concrete surrounds *Note the bundling of cables is not included in this cost*	Item 5.2	$38,400
			TOTAL COST 2022/2023		***$108,800***

09/17 STREET TREES PROGRAMME

Responsible Officer: *Leigh McCullagh – Works Manager*
Report prepared by: *Leigh McCullagh – Works Manager, Wayne Chellis –Project Adviser; Gail Eacher – Executive Assistant*

1 PURPOSE OF REPORT

The purpose of this report is to provide information relating to the planting and maintenance of street trees in towns and in response to requests received from Local District Committee's for the provision of street trees.

2 INTRODUCTION

This report includes the tree planting/management strategy that the Works Department adopted in 2011 and extracts from previous reports.

Council does not have a formal program for the planting of street trees in the municipality, however, during the annual budget process an allocation is made for street trees for the municipality as a whole.

Priority is given to CBD areas, main streets and other streets in which the property owners are more enthusiastic about the planting of trees at the frontage of their properties. Experience has proven that priority should be given to streets in which the property owners agree to water the trees as required.

In most instances the property owners in the newer subdivisions are more in favour of planting and watering trees than owners of established properties.

Trees are therefore planted on an as required basis as appropriate and in conjunction with street reconstruction works.

In excess of 5,600 trees have been planted in the Northern Midland's streets & parks and reserves which are recorded in Council's tree register.

The planting of street trees is subject to a number of limitations, which include verge width, presence of underground / overhead services, such as Aurora, Telstra, Sewer and Stormwater. Once a location and tree type is identified as being appropriate, the owners of neighbouring properties are consulted and if property owners agree to water the trees during the summer period, trees are then planted.

3 BACKROUND

3.1 Tree Plantings Longford Main Street

Proposed Stage 1 Marlborough Street CBD 1997

On the recommendation of a highly qualified tree arborist, supported by Council's Technical Services Department and the consensus of the committee, Council was to plant *Platanus Acerifolia* (Plane Tree Autumn Glory) in the CBD area as stage 1 in the winter of 1997.

During the planning approval process Council received a large adverse response by the public to the planting of trees in the verge (parking area) in the CBD area between William and High streets due to the proposed loss of parking space and impediment to the movement of large trucks; and the planting of the trees in the CBD was not approved by Council at that time.

In 2013 the Longford Local District Committee requested once again that trees be planted in the CBD area and given the rejection of the planning approval in 1997 it was suggested that a smaller tree *Pyrus Capital* be planted at selected locations in the footpath in accordance with the tree planting strategy;

following public consultation and the receipt of planning approval trees were planted on both sides of the street over a two-year period.

Stage 2 Wellington Street Tree Planting 1999 & Replanting 2011

In 1999 the proposal by the tree arborist to plant London Plane trees between Union and Archer streets was endorsed by Council following planning approval

At the time management raised concerns regarding the potential size of the trees and the tree arborist selected a new species of London Plane tree *Bloodgood* being a smaller variety and the trees not being planted within a concrete surround and without tree guards to provide protection from vehicles when parking. The trees were planted in accordance with the direction of the arborist, without tree guards, between Union Street and Archer Street in the verge at selected locations to ensure the number of parking spaces were not reduced.

During the following 12 years some of the trees were removed following ongoing concern from businesses and vehicle damage; others died. The few remaining trees grew too large and were removed in 2011.

Replacement of London Plane Trees

During the replacement of the London Plane trees in 2011 between Union and Archer Street the previous concerns raised were addressed by the Works Department

Pyrus Calleryana Capital (Ornamental Pear) was selected to provide adequate canopy development space above pedestrians and vehicles.

This particular species is proposed to be the narrowest growing *Pyrus* cultivar growing in Australia and is considered to be an ideal choice for narrow restricted areas around car parks and along narrow road verges and tolerates a wide range of soil and weather conditions.

3.2 Strategies for Planting Street Trees

In 2010, under the direction of Council officers, designs and castings were constructed for the planting of street trees in sealed road verges and footpaths, prior to that time Tasmanian Councils sourced their tree grates and guards from the Mainland

The concrete surrounds have been designed to fit on the top of a cast in situ concrete root barrier which is installed to increase the visual amenity, protect the trees from vehicle damage and support the tree guard, with steel formwork fabricated to bolt onto the concrete surround to hold the tree guard in place.

The concrete surrounds are predominately used in sealed parking areas and wide grass verges mowed with Council's ride-on mower.

Grates are required to be installed around trees installed within the footpath e.g. Longford CBD, with tree guards being installed in areas of increased pedestrian usage.

Watering of Trees in the CBD

New trees planted are watered by hand at least once per week in peak summer period for the first three years and the time period lengthens as the trees become established.

Future Damage by Tree Roots to Footpath and kerb

Under the tree planting guidelines council's insurers require root barriers to be installed to ensure root growth does not cause damage (tripping points) in footpaths which may result in a future public liability claim.
The purpose of installing root barriers is to direct the roots downwards instead of outwards.
Unfortunately, this directs the roots into the clay which sometimes prevents growth if the barriers are installed too deep and may even cause the tree to die as the trees become established.

3 STRATEGIC PLAN 2017/2027

The Strategic Plan 2017/2027 provides the guidelines within which Council operates. The following Strategic outcomes and strategies have relevance to this issue:

- People and Place
  - People
    Sense of Place
    Lifestyle
  - Place
    Environment
- Core Departmental Responsibilities
  - Works and Infrastructure
    Area Management Plan

4 POLICY IMPLICATIONS

There is currently no policy in relation to this matter, however, a recognised process is followed in regard to the planting of street trees and the maintenance thereof.

5 STATUTORY REQUIREMENTS

Legislation allows for service providers such as Aurora and Telstra; as well as the Department of State Growth to undertake maintenance/pruning of trees which are considered a threat to their infrastructure. Planning permits are applicable for plantings in some areas.

6 FINANCIAL IMPLICATIONS

Council allocates some $106,000 to street tree maintenance and tree planting. The amount allocated for the planting of new trees varies subject to the maintenance required.

This financial year Council will expend $40,000 to the treatment of Elm leaf beetle.

The cost of planting each tree ranges from $500 to $4,500 subject to the location and associated infrastructure necessary for risk management, protection of tree, visual amenity and to ensure the tree continues to grow to its full potential.

7 RISK ISSUE

Risk issues identified include:

- Trees planted on verges which are too narrow to allow for safe use of footpaths by users and which overhang the road pavement.
- Trees which hinder line of sight of road users.
- Trees dying when they are young due to insufficient water.
- Parking issues created by inappropriate plantings.
- Destruction of assets.

Under the tree planting guidelines council's insurers require root barriers to be installed to ensure root growth does not cause damage (tripping points) in footpaths which may result in a future public liability claim.

8 COMMUNITY CONSULTATION

From time to time, Local District Committees and communities request that Council consider the planting of street trees. Consideration is given to these requests with trees being planted as deemed appropriate. Consideration is given to a number of factors, including verge width, presence of underground / overhead services; once a location and tree type is identified as being appropriate, the owners of neighbouring

properties are consulted.

Prior to planting trees, the owners of the properties are provided with a letter from Council advising of the proposed planting and seeking their input into the watering of the trees.

9 OPTIONS FOR COUNCIL TO CONSIDER

As per the recommendation.

Consideration be given to the appointment of a landscape architect or suitably qualified person to undertake plans for the main streets of each town within the municipality as Stage 1 and other streets as future stages.

Unfortunately, the sealed street widths and location of services i.e. sewer, water, stormwater, Telstra cables, hydro poles and footpaths are not of a uniform width or in a straight alignment for the entire length of the streets, these factors would need to be considered in the formulation of any plan.

Councils outdoor workforce developed standard widths and alignments for sealed roads in new subdivisions and street reconstructions in 1993; however, the majority of streets were constructed prior to 1993.

10 OFFICER'S COMMENTS/CONCLUSION

The Northern Midlands council trees are one of the most important assets. These trees, in particular the ones planted in Ross, are crucial to the amenity of the unique township and provide numerous environmental, social, health and financial benefits to the town and community.

Northern Midlands Council through judicious planting and maintenance of trees, aims to conserve and enhance streetscapes within the municipality, whilst maintaining safe access for pedestrians and road users to all public thoroughfares.

Council's priority is to maintain public safety with respect to the planning, provision and maintenance of its trees and streetscapes. Council is aware that trees will conflict with other elements of a streetscape but recognizes that all components of a streetscape are essential to provide a pleasant and functional environment.

In 2011, under the direction of the then Works & Infrastructure Manager Council officers designed and developed associated street furniture and planting strategies, some of which have been taken-up by neighbouring councils.

10.1 Value of street trees

Social Values – Street trees can:

- Beautify and soften the harshness of streets and buildings
- Enhance heritage, character and significance
- Screen unattractive views
- Provide shade, therefore reduce sunburn and skin cancer
- Calm traffic and improve public safety
- Make streets more pedestrian friendly and improve community health
- Provide sensory stimulation – colours, forms, scents and sounds.

Environmental values – Street trees can:

- Reduce Carbon Dioxide CO2 gas levels by direct absorption and reduced car use
- Provide compost
- Slow down wind speeds
- Reduce storm water run-off
- Produce oxygen - O2 gas
- Trap airborne particles and pollutants

- Shade houses, cars and reduce energy consumption
- Provide fauna habitat and enhance biodiversity.

Economic values – Street trees can:

- Improve property values
- Reduce energy expenditure
- Encourage walking and reduce car usage.

10.2 Matters to be addressed when giving consideration to the planting of trees

- Traffic conditions and location of proposed trees in relation to driveways
- Alignment and uniformity
- Verandas constructed over footpaths
- Location of underground and overhead services
- Dropping of leaves, flowers, seeds, twigs, sap and branches
- Potential to cause damage to footpaths and contribute to property damage
- Conceal views and overshadow
- Become a mowing obstacle
- Compete with grass or garden plants
- Harbor pest animals, leading to noise and droppings
- Incur maintenance costs – pruning, street cleaning
- Existing streetscape character
- Environmental conditions
- Growing space and conditions
- Existing streetscape plans (if applicable)

10.3 Tree Planting

Tree planting is an essential component of the management of Council's tree assets. Continued tree planting by Council is required to maintain and increase the number of trees on public land throughout the municipality.

Council generally undertakes street tree planting in the cooler months of the year from June to September. The planting of larger advanced quality stock of the most suitable specie with improved installation and maintenance methods should ensure the tree grows to a healthy, mature specimen.

It is important to realise that Street trees are council's responsibility. Due to tree management and legal liability trees should generally only be planted by Council and not residents unless it is a condition of development consent.

10.4 Tree selection

Selecting a tree species to fit (at maturity) within the available space and making sure it is suitable to the climate conditions is critical to the long term survival.

Council has a list of trees that are recommended to be planted and those which should not be planted.

10.5 Planting of trees

10.5.1 Planting by residents
Unauthorised planting of street trees by residents is discouraged

10.5.2 Resident opposition to tree planting
The establishment or maintenance of a consistent planting theme can sometimes require Council to plant a tree in a nature strip against the wishes of the resident immediately adjacent (in particular in the CBD area). This is a difficult situation that calls for Council to

make a judgement regarding the rights of the wider community over the individual resident. However, past experience has shown that trees are unlikely to survive if the property owner does not want a tree planted at the front of the property
When making such a decision, it should be borne in mind that a major factor in the survival of a newly planted street tree is the cooperation of the nearest resident in maintaining that tree.

10.5.3 Tree Removal

Removal of trees from nature strips and parks is potentially the greatest source of conflict in the management of Council's trees. Decisions regarding tree removal become necessary in response to applications by residents, developers and external authorities or through observation of problem trees by Council staff. Concern associated with the removal of trees can be minimized through proper consultation with nearby residents.
Prior to removing large trees that are believed to be at the end of their useful life a report is undertaken by Councils arboricultural consultant Enspec.

10.6 Tree maintenance and Elm Leaf Beetle Treatment

Council should be mindful that the planting of trees may not be time consuming, however, the ongoing maintenance requires human and financial resources. Therefore, tree planting is a gradual process. Council has a documented tree maintenance and elm leaf beetle treatment regime, which includes:

10.6.1 Watering of street trees

It is not practical to install water systems in streets unless it is done prior to and in conjunction with the construction of the concrete kerb & gutter and driveways. The increased cost of water connections and ongoing annual cost of the connection is also prohibitive.
Trees are watered by hand using a small water tank on a utility, this work is carried out in the early morning when disruptions to the travelling public are minimal.

10.6.2 Tree maintenance by residents

Residents will be encouraged wherever possible to undertake tree maintenance, e.g. removing weeds, trimming grass, mulching and watering, however, pruning fertilising and pest control is Council's responsibility.

10.6.3 Tree pruning

Council trees are pruned, in accordance with the Australian Standard for Tree Pruning (AS4373) to:

- Maintain public safety through the removal of structurally unsound or dangerous limbs;
- Maintain tree health through the removal of dead or diseased material;
- Uplift the canopy (prune lower branches) to allow pedestrian and road clearance
- Maintain prescribed clearances from services (in accordance with the *Code of Practice for Powerline Clearance (Vegetation) 1996*);
- Maintain prescribed clearances over roads, footpaths and driveways;
- Ensure traffic safety and visibility of street signs;
- To reduce leaf fall or bird droppings
- To improve street lighting over private property
- Minimize future work requirements through the removal of potential problems at an early stage.

10.6.4 Tree Maintenance

Tree inspections are carried out by Enspec a privately owned company who are qualified and experience arboricultural and environmental consultants operating out of Victoria.
Enspec also undertake tree inspection for a number of other Councils in Tasmania including

Launceston City and Meander Valley councils, as well as for Forestry Tasmania, Port Arthur and a number of councils on the mainland.

10.6.5 *Number of Trees Inspected and Frequency*
In excess of 5,600 trees planted in the Northern Midland's streets, parks and reserves are inspected every two years. In the interim, isolated tree concerns within the two-year period are inspected by Enspec on request when making monthly visits to Tasmania. Inspections are undertaken to ensure the trees do not pose a risk to person or property and to mitigate any potential public liability claims. Following inspections, a report is provided on each one of the 5,600 trees.

10.6.6 *Documentation/ Tree Inventory*
Documentation provided on each tree includes a number of features on each tree, including: ID number, precise location, genus, species, height, trunk width and type, canopy width, proximity to buildings/roads, age, life expectancy, root structure, overall condition, risk rating and score, work required, priority and time frame.
Council recognises that the fundamental component of the management of Council's tree assets is the development of a Tree Inventory. Council has been working on the continual upgrading and development of the tree inventory in parks and streets for a number of years. New tree plantings and tree removals are also documented in the Tree Inventory.

10.6.7 *Elm Leaf Beetle Treatment*
As a result of their considerable past experience Enspec and the mainland contractors Arbor Spray undertake inspections and provide reports on trees, which included the specifications required in preparation for the elm leaf beetle treatment, treatment undertaken by Arbor Spray has previously had a success rate of 100%.

10.6.8 *Damage caused by trees*
The response to damage caused by trees will vary according to the type and extent of the damage. Procedures have been developed to ensure insurance claims received by Council are managed in an efficient and effective manner.

Tree planting should be a gradual process and there is no urgent requirement to make significant changes to Council's current successful tree planting strategy and maintenance regime.

RECOMMENDATION 1

The matter be discussed.

RECOMMENDATION 2

That Council
i) continue to undertake the planting of street trees as outlined in this report;
ii) undertake a survey and provide report on the existing services and available space to plant trees in accordance with the tree planting strategy (as listed in this report) for the main streets of Northern Midlands townships; and
iii) engage a landscape architect or suitably qualified person to develop a Stage 1 Main Street Tree Program for the municipality.

DECISION

Cr Adams/Cr Knowles

That Council

i) continue to undertake the planting of street trees as outlined in this report;

ii) undertake a survey and provide report on the existing services and available space to plant trees in accordance with the tree planting strategy (as listed in this report) for the main streets of Northern Midlands townships; and

iii) engage a landscape architect or suitably qualified person to develop a Stage 1 Main Street Tree Program for the municipality.

Carried unanimously