

ENCL:  
YES

1ST ORDINARY COUNCIL MEETING/CONF

AGENDA ITEM: C26.1.1

## ESTABLISHING A RESILIENT URBAN FOREST FOR DARWIN

REPORT No.: 18CO0050 CB:jh COMMON No.: 3777063

DATE: 13/11/2018

**Presenter:** Manager Infrastructure Maintenance, Ron Quinn

**Approved:** General Manager Engineering and City Services, Brendan Smith

### **PURPOSE**

The purpose of this report is to present Council with the findings and recommendations of the Tree Re-establishment Advisory Committee (TRAC) in their report entitled 'Establishing a Resilient Urban Forest for Darwin'.

### **LINK TO STRATEGIC PLAN**

The issues addressed in this Report are in accordance with the following Goals/Strategies as outlined in the 'Evolving Darwin Towards 2020 Strategic Plan':-

#### **Goal**

2 Vibrant, Flexible and Tropical Lifestyle

#### **Outcome**

2.2 A sense of place and community

#### **Key Strategies**

2.2.3 Improve the landscaping, streetscape, infrastructure and natural environment

### **KEY ISSUES**

- Tropical Cyclone Marcus was a Category 2 Tropical Cyclone that heavily impacted Darwin's urban forest on 17 March 2018.
- Council established the Tree Reestablishment Advisory Committee (TRAC) to provide recommendations on suitable tree species for replanting and best practice in re-establishing trees.
- Regardless of Councils best efforts or following best practice, it must be acknowledged tree failures and losses will occur during storm events.
- 194 species of trees have been identified on the preferred planting list for Darwin.
- 25 species of trees have been presented as not recommended for planting in Darwin.

## **RECOMMENDATIONS**

- A. THAT Report Number 18CO0050 CB;jh entitled Establishing A Resilient Urban Forest For Darwin, be received and noted.
- B. THAT Council note and thank the members of the Tree Re-establishment Advisory Committee.
- C. THAT Council endorse the 'Preferred Trees for Darwin' as listed in **Appendix A**, for use in its future replanting programs.
- D. THAT Council endorse the 'Trees Recommended Not To Be Planted' as listed in **Appendix B**, and that these would not be used in its future replanting programs.
- E. THAT Council endorse the development of an Urban Forest Strategy that incorporates, where applicable, the best practise recommendations of the Tree Re-establishment Advisory Committee and is presented to Council in a further report at 1st Ordinary April.

## **BACKGROUND**

At the Ordinary Council meeting on 14 August 2018, Council resolved as follows:

*DECISION NO.22\1040 (14/08/18)*

### **Tree Re-establishment Committee Membership Endorsement**

*Report No. 18CO0042 CB;jw (14/08/18) Common No. 3777063*

*With the consent of the Council, the Decisions arising from this item were moved from the Confidential Section into the Open Section of the Minutes.*

- A. *THAT Report Number 18CO0042 CB;jw entitled Tree Re-establishment Committee Membership Endorsement, be received and noted.*
- B. *THAT Council appoints Dr Greg Leach Chairperson of the Tree Re-establishment Advisory Committee (TRAC) in accordance with the Local Government Act, for a period commencing 16 August 2018 to 8 November 2018.*
- C. *That Council appoints Tony Cox and Adam Granger as the community representatives of the Tree Re-establishment Advisory Committee (TRAC) in accordance with the Local Government Act, for a period commencing 16 August 2018 to 8 November 2018.*
- D. *THAT Council appoints Alderman P Pangquee to the Tree Re-establishment Advisory Committee.*

- E. *THAT Council remunerate the Committee Chairperson in accordance with the Local Government Act and as outlined within Report Number 18CO00412 CB:jw entitled Tree Re-establishment Committee Membership Endorsement.*
- F. *THAT this Decision be moved into Open.*

At the Ordinary Council meeting on 17 July 2018, the formation of the Tree Re-establishment Advisory Committee (TRAC) was endorsed as per below:

*DECISION NO.22\0922 (17/07/18)*

**Trees in the Darwin Municipality - Update July 2018**

*Report No. 18CO0039 CB:jw (17/07/18) Common No. 3777063*

- A. *THAT Report Number 18CO0039 CB:jw entitled Trees in the Darwin Municipality - Update July 2018, be received and noted.*
- B. *THAT Council, pursuant to Sections 54 and 55 of the Local Government Act, establish the Tree Re-establishment Advisory Committee.*
- C. *THAT Council endorse the Terms of Reference for the Tree Re-establishment Advisory Committee at **Attachment A**, as amended to include:*
- *An Elected Member as a member*
  - *Other experts as required*
  - *A timeframe of 12 weeks*
  - *Public distribution of business papers to Report Number 18CO0039 CB:jw entitled Trees in the Darwin Municipality - Update July 2018.*
- D. *THAT a further report be presented to Council to appoint members of the Tree Re-establishment Advisory Committee in accordance with the Local Government Act.*

Further to that, at the Ordinary Council meeting on 29 May 2018, Council resolved as follows:

*DECISION NO. 22\0781 (29/5/18)*

**Trees in the Darwin Municipality - Update**

*Report No. 18CO0020 (23/05/18) Common No. 3777063*

- A. *THAT Report Number 18CO0020 NK:jh entitled Trees In The Darwin Municipality - Update, be received and noted.*
- D. *THAT Council endorse the establishment of a panel of experts to recommend future tree species (mainly native to top end areas) selection and planting requirements as identified in Report Number 18CO0020 NK:jh entitled Trees in the Darwin Municipality - Update.*

At the Ordinary Council meeting on 27 March 2018, Council resolved as follows:

*DECISION NO.22\0592 (27/03/18)*

**Dangerous Trees in the Darwin Municipality**

*Common No. 3777063*

- A. *THAT Council considers the issue of potentially dangerous trees that are planted throughout the City of Darwin Municipality, and in particular the trees that have come down during recent significant weather events and develop a plan to manage these trees.*
- B. *THAT the report include but not be limited to:*
- An investigation is undertaken to identify, in consultation with local experts, suitable species of trees mainly native to the top end areas with high rainfall and cyclonic conditions to be used in the future for landscaping.*
  - A review of the list trees suitable to areas prone to cyclones been undertaken to ensure that all trees that are removed are replaced with suitable trees.*

**DISCUSSION**

The Tree Reestablishment Advisory Committee (TRAC) convened on Thursday 16 August 2018 and met weekly until its cessation on Thursday 25 October 2018. The TRAC delivered a report titled 'Establishing a Resilient Urban Forest for Darwin' as shown at Attachment B.

This suite of best practice recommendations to Council will have far reaching consequences that if adopted will help ensure a more resilient tree population throughout the Darwin community.

Work undertaken by the TRAC and resulting recommendations presents Council with an opportunity to consider the long term strategic outlook of Urban Forest Management and its current operations.

"The committee recommends that City of Darwin should review the current resource allocation concerning tree management and its ability to provide a satisfactory level of service to the Councils tree assets, and community's tree population." **(Recommendation 18)**

"The committee recommends that City of Darwin should review all tree related policy and process and assess for their ability to meet the organisational requirements for tree risk management, tree condition assessment, tree removal, tree retention, tree replacement and development consent, and for their performance against contemporary best practice urban forest management models and existing/future strategic outcomes." **(Recommendation 19)**

“A citywide, long-term Strategic Urban Forest Management Plan is required.”  
**(Recommendation 20)**

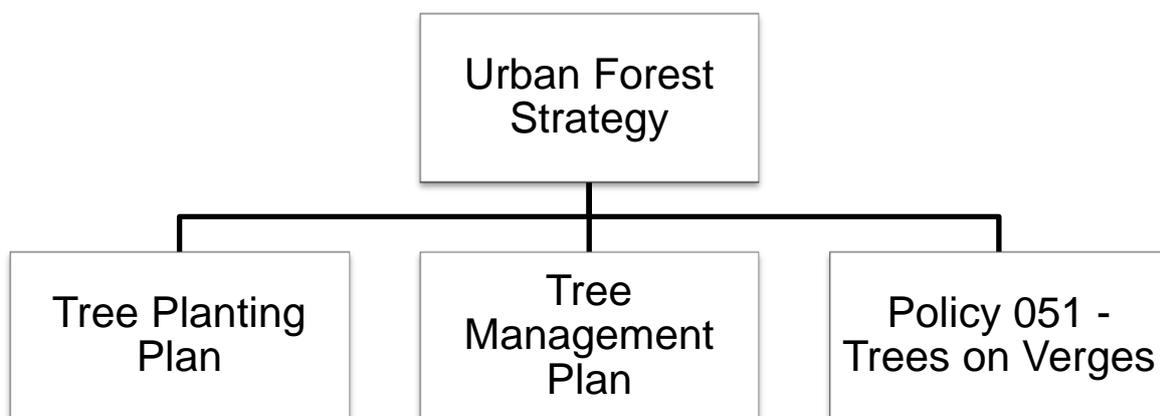
An Urban Forest Strategy will be a strategic overarching framework to guide operational planning.

The strategy will focus on:

- Urban forest resiliency
- Urban forest diversity including age and species
- Increased canopy coverage
- Environmental, economic and community benefits

A brief summary of the steps required in development an Urban Forest Strategy includes:

- Identifying current and future drivers, benefits and barriers
- Assessing available asset and data information
- Developing a vision, objectives, goals and targets
- Creating an implementation plan to deliver the strategic plan
- Community engagement



Following a consultation process, an Urban Forest Strategy plan will be presented to Council at 1st Ordinary in April. Engaging a project manager would be necessary to develop the strategy. The strategy will further inform the tree planting plan and tree management plan which will determine the resource requirements that are required.

It is not recommended to adopt the report ‘Establishing a Resilient Urban Forest for Darwin’ in its entirety and rather the report, where applicable, will be used to inform the development of an Urban Forest Strategy.

There is a broader desire that this approach will be carried into a Streetscape Strategy and Open Space Strategy, however the intention of this report is for tree re-establishment in Darwin and therefore these items will not be discussed.

A summary of the TRAC recommendations is presented in the table provided on the following pages, grouped under the headings found within the TRAC report and comments from Council Officers is provided for response to each recommendation.

<b>Plant Selection</b>		
<b>#</b>	<b>TRAC Recommendation</b>	<b>Council Comment</b>
1	THAT further evaluation should be done on the tree species in numerous individual planting sites in addition to the evaluation of many potentially suitable species that are not currently represented in the Darwin region.	Council will evaluate any species (as identified), that may not currently be represented in one of the tree species lists.
2	THAT ongoing trials and research on potential new tree species for landscaping in Darwin could be supported by City of Darwin and undertaken collaboratively with various stakeholders in Darwin.	Council will support ongoing trial and research of potential new tree species.
3	THAT most of the tree species in Appendices A and B are 'Unknown' for climate change resilience. This is an area in need of further research that could be promoted by City of Darwin.	Council will support third-parties carrying out research in the field of climate change resilience.
4	THAT City of Darwin has the opportunity to liaise with the community and assess community attitudes about trees being replanted, what species, where they should be planted, and what their idea of a walkable livable cool suburb is.	<p>Community consultation occurred in October through Council's Engage Darwin portal and Facebook in respect of the TRAC calling for public comment on the various tree species lists to be planted or not planted.</p> <p>A tree planting plan is being developed for delivery to Council in March 2019 and further community engagement will accompany this.</p>
<b>Tree Lists</b>		
5	THAT City of Darwin officers over time complete the desired attribute fields nominated in Appendix C to the tables shown in Appendix A and B.	Council will continue to input technical attributes.
<b>Plant Procurement and Plant Supply</b>		
6	THAT City of Darwin preferred tree supply is given to Nursery Industry Accreditation Scheme Australia Accredited nurseries. The accreditation provides an audited best practice system for production nurseries that ensures high quality plant stock.	<p>Council currently preferentially procures trees from accredited nurseries and will continue with this practice.</p> <p>Council will procure stock from unaccredited nurseries when they can demonstrate trees are produced to City of Darwin specifications.</p>

<b>Pre-order and lead times</b>		
7	THAT City of Darwin continues with the contract for the supply of container grown trees.	Council currently has contracts in place with plant nurseries that grow trees to the required specification and will continue with this practice.
<b>Tree Installation</b>		
8	THAT City of Darwin follow the Australian Standard AS 4419-2003 Soils for Landscaping and Garden Use with the use of "Sandy Loam" in the tree pit.	Council will follow the Australian Standard AS 4419-2003 Soils for Landscaping and Garden Use.
<b>Irrigation, water harvesting</b>		
9	THAT City of Darwin stipulate for all tree management that watering should deliver a suitable volume of water in such a way that it penetrates the soil profile to a depth of at least 450mm.	Council currently carries out this recommendation and will continue with this practice.
10	THAT City of Darwin stipulates in civil design projects that storm water harvesting using storm water collection inlets should be installed wherever possible, and mandatory within the CBD.	Council currently carries out this recommendation, excluding the mandatory requirement within the CBD.  Council will investigate the feasibility of mandatory storm water collection within the CBD.
<b>Tree data base and data collection</b>		
11	THAT City of Darwin uses a database to systematically inventory park and street tree assets. Goal is 100% of trees in the City of Darwin municipality be identified and plotted over a 3-year period.	Council currently collects data for trees within the Asset Edge Nemus software system. Data is collected reactively when inspections are required or for Bi-Annual tree assessments.  Council do not have the resources to undertake this recommendation, however it is considered best practice.  Council will investigate the feasibility and resource requirements to implement this recommendation.
12	THAT City of Darwin program reassessment of every tree every 3 years.	Council has an endorsed Tree Management Plan that guides assessment requirements of trees. This is not considered feasible within current resourcing.

13	THAT City of Darwin provides appropriate Council officers and arborists with adequate resources for emergency operational data gathering to react promptly following an event.	Council will consider this recommendation with Emergency Response Planning.
14	THAT City of Darwin regularly reviews this report and the associated tree lists every 3 years or after a significant storm event.	Council supports the recommendation to review relevant plans that may be developed as an outcome of the TRAC report.
<b>Ongoing maintenance and associated funding – trees are a valuable community asset</b>		
15	THAT City of Darwin adopt the City of Melbourne tree valuation methodology.	Further investigation required as to implications on Council operations and the associated impacts on policies, procedures, processes, resourcing and costs.
16	THAT City of Darwin actively manage the loss of trees in the municipality to maintain and increase current canopy cover levels in public open space to a minimum of 50% by 2030.	Further investigation required as to the feasibility of this goal. A canopy cover goal is considered best practice and would be incorporated into an Urban Forest Strategy.
17	THAT City of Darwin review the Tree Management Plan to ensure it reflects the findings of this report and any recommendations endorsed by council.	The Tree Management Plan will be reviewed in line with Council endorsement of any of the recommendations.
18	THAT City of Darwin reviews its resources to maintain the urban forest to a satisfactory level.	Council supports this recommendation.
19	THAT City of Darwin updates its existing policy, procedures and processes for all tree related management to meet the organisational requirements for tree risk management, tree condition assessment, tree removal, tree retention, tree replacement and development consent.	Council actively reviews policies and procedures and will support this recommendation.
20	THAT City of Darwin prepare a citywide, long-term Strategic Urban Forest Management Plan.	This recommendation is considered a high priority and is discussed in the body of this Report.
<b>Pruning</b>		
21	THAT City of Darwin adopt AS4373-2007 Pruning of Amenity Trees as the standard for maintaining trees.	Council currently carries out this recommendation and will continue with this practice.

<b>Monitoring/ risk management/ acceptable risk thresholds</b>		
22	THAT City of Darwin adopts an industry standard, peer reviewed tree risk assessment system.	<p>Council currently operates under an endorsed Tree Management Plan and Visual Tree Risk Assessment framework that utilises the Asset Edge Nemus software system.</p> <p>Any proposed change would require further investigation as to implications on Council operations and the associated impacts on policies, procedures, processes, resourcing and costs that this recommendation would have.</p>
23	THAT City of Darwin conduct further community consultation and education to ensure the community understands the balance between an acceptable level of tree risk and the type of landscape that is envisaged for Darwin.	Council supports this recommendation.
<b>Tree protection</b>		
24	THAT City of Darwin adopt AS4970-2009 Protection of Trees on Development Sites as the standard.	Council supports this recommendation, however further investigation is required as to implications on Council operations and the associated impacts on policies, procedures, processes, resourcing and costs.
25	THAT City of Darwin adopt mechanisms to enforce tree protection.	Council supports this recommendation, however further investigation is required as to implications on Council operations and the associated impacts on policies, procedures, processes, resourcing and costs.
26	THAT City of Darwin review existing measures in other LGAs such as by-laws, Tree Protection Orders, Vegetation Protection overlays, tree removal/pruning permit systems, development consent requirements and the associated need for resourcing of such systems, including enforcement and surveillance.	Council supports this recommendation.

<b>Education</b>		
27	THAT City of Darwin develop and deliver tree management education programs to tree management staff, tree workers, parks crews, all contractors, (including irrigation), development assessment staff, customer service staff, high level decision makers and the wider community.	Council supports this recommendation to undertake internal information sharing and training across various relevant departments.

### **CONSULTATION PROCESS**

In preparing this report, the following City of Darwin officers were consulted:

- Acting General Manager Infrastructure
- Coordinator Parks & Reserves
- Senior Technical Officer Parks
- Technical Officer Parks
- Manager Engagement and Participation
- Manager Marketing and Communications

In preparing this report, the following External Parties were consulted:

- Dr Greg Leach, TRAC Chairman

In October 2018 the draft list of tree species recommended for planting and not recommended for planting was put out to the Darwin community for public feedback through the Council's Engage Darwin portal and Facebook page. The results of this consultation are contained in **Attachment C**.

This consultation was effective in achieving the objectives, it had a good reach (13,000 people through Facebook and 600 visits to consultation page) indicating a high awareness and interest in the project in the community.

### **POLICY IMPLICATIONS**

At this stage the broad range of proposed recommendations, if endorsed, would have a significant impact on a number of existing Council by-laws, policies, procedures and plans, therefore requiring review.

### **BUDGET AND RESOURCE IMPLICATIONS**

There would be significant additional budget and resource implications if these recommendations were endorsed. They will need to be considered individually in much greater detail and reported back to Council.

## **RISK/LEGAL/LEGISLATIVE IMPLICATIONS**

The Committee's advice to follow best practice principles contained within the report is aimed to mitigate future adverse tree risk issues by improving the urban forest through whole of life tree management, including correct species selection, planting techniques and ongoing protection.

As each recommendation is further reported on, any implications will be made clear.

This item is considered 'Confidential' pursuant to Section 65(2) of the Local Government Act and 8(c)(iv) of the Local Government (Administration) Regulations, which states municipal council may close to the public only so much of its meeting as comprises the receipt or discussion of, or a motion or both relating to, information that would, if publicly disclosed, be likely to prejudice the interests of the council or some other person.

## **ENVIRONMENTAL IMPLICATIONS**

A significant amount of tree canopy cover providing cooling shade cover and biodiversity was lost through the effects of Cyclone Marcus and this will have a far reaching effect for many years on the Darwin community.

The amount of loss will be reported on once GIS analysis of before and after CSIRO GeoVision satellite data has been received.

The 'Establishing A Resilient Urban Forest For Darwin' report details the best practice approach to regenerating Darwin's urban forest, and this approach in itself will need to be strategic, well planned and resourced and committed to by subsequent Councils.

## **COUNCIL OFFICER CONFLICT OF INTEREST DECLARATION**

We the Author and Approving Officers declare that we do not have a Conflict of Interest in relation to this matter.

**RON QUINN**  
**MANAGER INFRASTRUCTURE**  
**MAINTENANCE**

**BRENDAN SMITH**  
**GENERAL MANAGER**  
**ENGINEERING AND CITY**  
**SERVICES**

For enquiries, please contact Chris Bailey on 8930 0655 or email:  
c.bailey@darwin.nt.gov.au.

**Attachments: provided under Separate Cover**

Attachment A: TRAC Terms of Reference  
Attachment B: Establishing a Resilient Urban Forest For Darwin  
Attachment C: TRAC Consultation Report