AGENDA

Ordinary Council Meeting
Tuesday, 26 October 2021

I hereby give notice that an Ordinary Meeting of Council will be held on:

Date:	**Tuesday, 26 October 2021**
Time:	**5:30pm**
Location:	**Council Chambers** **Level 1, Civic Centre** **Harry Chan Avenue, Darwin**
Webcasting:	**MS Teams Link to Webcast**

Scott Waters

Chief Executive Officer

ORDINARY COUNCIL MEMBERS

The Right Worshipful, the Lord Mayor Kon Vatskalis (Chair)
Alderman Paul Arnold
Alderman Jimmy Bouhoris
Alderman Justine Glover
Alderman Sylvia Klonaris
Alderman Brian O'Gallagher
Alderman Mick Palmer
Alderman Peter Pangquee
Alderman Morgan Rickard
Alderman Vim Sharma
Alderman Ed Smelt
Alderman Amye Un
Alderman Rebecca Want de Rowe

OFFICERS

Chief Executive Officer, Scott Waters
Chief Financial Officer, Simone Saunders
General Manager Community & Regulatory Services, Matt Grassmayr
Acting General Manager Engineering & City Services, Emma Young
General Manager Innovation Growth & Development Services, Joshua Sattler

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Order of Business

1 ACKNOWLEDGEMENT OF COUNTRY

2 THE LORD'S PRAYER

3 MEETING DECLARED OPEN

4 APOLOGIES AND LEAVE OF ABSENCE

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4.2 Leave of Absence Granted

4.3 Leave of Absence Requested

5 ELECTRONIC MEETING ATTENDANCE

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5.2 Electronic Meeting Attendance Requested

6 DECLARATION OF INTEREST OF MEMBERS AND STAFF

7 CONFIRMATION OF PREVIOUS MINUTES

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8 MOVING OF ITEMS

8.1 Moving Open Items into Confidential

8.2 Moving Confidential Items into Open

9 MATTERS OF PUBLIC IMPORTANCE / LORD MAYORAL MINUTE

Nil

10 PUBLIC QUESTION TIME

11 PETITIONS

12 DEPUTATIONS AND BRIEFINGS

13 NOTICES OF MOTION

13.1 NOTICE OF MOTION - DEVELOPMENT CONSENT AUTHORITY NOMINATIONS

Attachments: 1. Development Consent Authority Minister Lawler Correspondence ⇩

At the upcoming Ordinary Council Meeting, I Lord Mayor of Darwin Kon Vatskalis, propose to rescind and replace resolution ORD411/21, to meet the updated requirements of nominations and appointment to the Development Consent Authority.

MOTION

THAT Council rescind part 14 (b) of resolution ORD411/21 pertaining to Development Consent Authority (DCA) being:

THAT Council nominate Council members to External Committees for the period 28 September 2021 to 6 December 2021 as follows:

Development Consent Authority (DCA)

Member – Alderman Mick Palmer

Member – Alderman Peter Pangquee

Alternate Member – Alderman Brian O'Gallagher

And Replace with

That Council nominate the following Community Representatives to the Minister for Infrastructure, Planning and Logistics for the Minister's consideration as appointments to the Darwin Development Consent Authority (DCA) for a length of time determined by the Minister in order of the below Council Preferences:

1. Alderman Mick Palmer
2. Alderman Peter Pangquee
3. Alderman Brian O'Gallgher
4. _____

REASON:

The Chief Executive Officer will provide background in relation to the required changes.

Signed by me at Darwin this 21 October 2021

LORD MAYOR KON VATSKALIS

MINISTER FOR INFRASTRUCTURE, PLANNING AND LOGISTICS

Parliament House
State Square
Darwin NT 0800
minister.lawler@nt.gov.au

GPO Box 3146
Darwin NT 0801
Telephone: 08 8936 5566
Facsimile: 08 8936 5609

Mr Scott Waters
Chief Executive Officer
City of Darwin
GPO Box 84
DARWIN NT 0801

Email: scott.waters@darwin.nt.gov.au

Dear Scott Waters

I would ordinarily write to the Mayor on this matter, but given the timing of this correspondence so close to the recent local government elections, I determined it more appropriate to write to you in your capacity as Chief Executive Officer, in this instance.

The term of the three current community members (local government council nominated members) on the Darwin Division of the Development Consent Authority expires on 3 December 2021.

The three current community members are Alderman Peter Pangquee, Alderman Simon Niblock and Alderman Robin Knox (alternate community member). The alternate community member acts for a community member when they are absent or unable.

In accordance with section 91(2) of the *Planning Act 1999*, the number of persons nominated must be at least one greater than the number of vacancies to be filled. Accordingly, could you please nominate four persons you think suitable to appoint as community members.

You are required to include with your nominations a completed registration form (attached) for each nominee.

Community members may be councillors/aldermen, or members of the public with good standing whom the local authority believe will represent the community. An employee of a local authority is not eligible to be appointed as a community member for that local authority.

NORTHERN TERRITORY GOVERNMENT

Please note that pursuant to section 91(3) of the *Planning Act 1999*, if the local government council fails to nominate the number of persons required, I may appoint any person I consider fit.

Please provide your four nominations and completed registration forms to myself at minister.lawler@nt.gov.au with cc to development.consentauthority@nt.gov.au by 25 October 2021.

If you have any questions in relation to this correspondence please contact Ms Dawn Parkes, A/Director Development Assessment Services on 08 8999 6048 or dawn.parkes@nt.gov.au

Yours sincerely

Eva Lawler

EVA LAWLER

- 2 SEP 2021

Community Member of the Development Consent Authority

Registration Form for each Local Government Council nominee

First Name		
Middle name/s		
Surname		
Contact phone number		
Contact email		
Are you an NTG or Commonwealth employee ☐ YES ☐ NO	Are you an Australian Citizen ☐ YES ☐ NO - Pease attach your current working visa	Do you present as Aboriginal or Torres Strait islander ☐ YES ☐ NO
Current employment: -		
Qualifications: -		
Please attach to the Council nomination letter and email to Minister.lawler@nt.gov.au with a cc to development.consentauthority@nt.gov.au		

14 ACTION REPORTS

14.1 ADVERTISING AND CLUB BRANDING AT OVALS

Author: **Coordinator Recreation & Leisure**

Authoriser: **General Manager Community and Regulatory Services**

Attachments: **Nil**

RECOMMENDATIONS

1. THAT the report entitled Advertising and Club Branding at Ovals be received and noted.
2. THAT Council adopt the following principles for the management of advertising and club branding at ovals:
   (a) City of Darwin will assess and approve applications for advertising and club branding at ovals where stakeholders have a lease or tenancy agreement provided:
      (i) All applications are compliant to City of Darwin policies, procedures and technical specifications.
      (ii) All advertising signage on boundary fences and scoreboards is facing the oval.
   (b) Only indoor advertising signage will be considered for oval clubhouses and/or pavilions.
   (c) That applications for painting club colours on oval clubhouse and/or pavilions will not be considered at Gardens Oval.

PURPOSE

The purpose of this report is to present principles for adoption regarding advertising including club branding on City of Darwin Sporting Ovals.

KEY ISSUES

- City of Darwin maintains seventeen sporting ovals, five of these include a lease or agreement for a clubhouse or pavilion. Facilities related to this report exist at Bagot, Gardens, Kahlin, Nightcliff and Malak sporting ovals. Future development at other sporting ovals will be covered under these principles if applicable.
- Council Procedure 032 - Boundary Fence Signage guides the installation and management of boundary fence advertising at City of Darwin ovals. This procedure allows sporting clubs and community organisations to apply to erect temporary or semi-permanent boundary fence signage at ovals where there is also a perimeter fence.
- City of Darwin has received two requests from oval stakeholders:
  - Waratah Football Club request approval to install advertising signage on the Gardens Oval One scoreboard.
  - Darwin Olympic Sporting Club request approval to paint Malak Oval Pavilion in club colours and include their logo, image, and club name.

DISCUSSION

City of Darwin maintains seventeen sporting ovals, five of these provide a clubhouse and/or pavilion including a kitchen, kiosk and/or bar area and storage space. These five facilities are located at District and Regional level ovals. The table below lists agreements for the use of facilities, provided exclusively for an annual subsidised fee.

Facility	Current Agreement	Lead Tenant/s	Assigned Club
Gardens Oval Clubhouse	Current Lease expires 2024	AFL NT/Cricket NT	Waratah FC
Bagot Oval Pavilion	Deed of Agreement in draft	Football NT	Mindil Aces FC
Malak Oval Pavilion	Deed of Agreement in draft	Football NT	Darwin Olympic SC
Kahlin Oval Pavilion	Current Deed of Agreement expires 2024	Darwin Cricket Club	Darwin Cricket Club
Nightcliff Oval Canteen	Under construction, Deed of Agreement with AFL NT, and Cricket NT to be put in place once complete.		

City of Darwin recently received requests from two oval stakeholders regarding advertising and branding:

- Waratah Football Club request approval to install advertising signage on the Gardens Oval One scoreboard.
- Darwin Olympic Sporting Club request approval to paint Malak Oval Pavilion in club colours and include their logo, image, and club name.

Advertising

In the past requests to install advertising signage have been approved on an ad hoc basis. Some signs remain in place under historic agreements.

Council Procedure 032 - Boundary Fence Signage was developed to guide the installation and management of boundary fence advertising signage at City of Darwin ovals. This procedure allows sporting clubs to apply for temporary or semi-permanent boundary fence signage, at ovals where there is also a perimeter fence.

Temporary signage must be removed on the day of competition or event.

Semi-permanent signage can be approved for the applicant's playing season, or for a 12-month period, where there is no conflict with in-season user's signage.

The procedure does not allow for other locations for signage such as perimeter fences, scoreboards, pavilions, or oval naming rights. The procedure states that club identification signage is not permitted at City of Darwin sporting ovals, to maintain community aesthetics and encourage multi-use.

Sporting clubs are increasingly looking to raise revenue through sponsorship. It has potential to provide income to support provision of sporting and recreation activities benefiting the community. Clubs would like to install signage promoting their sponsors on some structures, including boundary fences, scoreboards, grandstands, and the exterior of pavilions.

Club branding of oval pavilions

Traditionally City of Darwin amenity blocks have been painted green or a colour sympathetic to the surrounding environment, such as the precinct colours of Gardens Oval.

Some facilities, however, have been painted in sporting club colours without application or approval from City of Darwin, such as the old kiosk at Nightcliff that was built by the Nightcliff Football Club and painted in club colours.

Painting or branding clubhouse facilities with club colours, logo, or name, creates 'home venue' identity. Officers recommend Council allow stakeholders with a lease or tenancy agreement in place for a clubhouse facility, to apply for approval to paint or erect club identification signage on the pavilion. Applications will be then assessed by Officers.

Any painting of pavilions will be at the tenant's cost. It will also be the tenant's responsibility under their Agreement, that they return the asset to good and hireable condition, (including removal of any club branding and/or painting) when they vacate.

As Gardens Oval complex hosts multiple clubs, it is recommended for equity that the colour of all buildings within the facility remain as they are rather than allowing painting in club colours. This would also maintain the established colour scheme across all buildings at this location.

Officer recommendations

Officer's recommend that City of Darwin adopt the following principles for the management of advertising and club branding at ovals:

- City of Darwin will assess and approve applications for advertising and club branding at ovals where stakeholders have a lease or tenancy agreement provided:
    - All applications are compliant to City of Darwin policies, procedures and technical specifications.
    - All advertising signage on boundary fences and scoreboards is facing the oval.
- Only indoor advertising signage will be considered for oval clubhouses and/or pavilions.
- Applications for painting club colours on oval clubhouse and/or pavilions will not be considered at Gardens Oval.

Pending Council's endorsement of the recommended principles, Procedure 032 Boundary Fence Signage will be reviewed and updated to provide a clear process for advertising or club branding at City of Darwin ovals.

PREVIOUS COUNCIL RESOLUTION

DECISION NO.21\4237 (22/03/16)

Sports Field Plan 2016 - 2026

A. THAT Report Number 16C0026 MG:kl entitled Sports Field Plan 2016 - 2026, be

received and noted.

B. THAT Council endorse the Sports Field Plan 2016 - 2026 at **Attachment A** of

Report Number 16C0026 MG:kl entitled Sports Field Plan 2016 - 2026.

C. THAT provision for the Sports Field Plan be referred to the 2016/17 budget process

for consideration as part of the Long Term Financial Plan.

STRATEGIC PLAN ALIGNMENT	2 A Safe, Liveable and Healthy City 2.3 By 2030, Darwin residents will be more active and healthy
CRITICAL DATES	All agreements currently in draft are expected to be finalised within 8 months to allow for any review of fees and charges and confirm appropriate rental amounts.
BUDGET / FINANCIAL	**Budget/Funding:** Nil **Is Funding identified:** Nil Council charges an annual fee of $705 for oval users to erect boundary fence signage.
RISK ASSESSMENT	**Assets & Infrastructure** ☐ **Environment & Waste** ☐ **Financial** ☐ **Info Comms & Tech** ☐ **Legal & Compliance** ☐ **Ops & Service Delivery** ☐ **Reputation & Brand** ☑ **Work Health & Safety** ☐ In accordance with City of Darwin Risk Management Framework, the post treatment, mitigation risk is: Very Low
LEGISLATION / POLICY CONTROLS OR IMPACTS	**Policy:** Council Policy 042 Outdoor Advertising Signs Code states advertising signs on land zoned Organised Recreation should be limited to those necessary to identify the use of the land and be sited to minimise their impact on the locality. However, a sign on enclosed land (including a sporting field) or within a building which is not readily visible from a public area outside the enclosure or building is exempt from the signs code.
RESOURCE IMPLICATIONS	Nil
CONSULTATION & ENGAGEMENT	**Engagement Level:** Discuss The following internal staff were consulted in preparing this report: • Manager City Planning • Coordinator Building & Facilities
COMMUNICATION PLAN FOR THIS INITIATIVE	Nil
PLACE SCORE STATEMENT	The report recommendation delivers on the Place Score priority to support the strengthening of social ties and support networks in local communities.
DECLARATION OF INTEREST	The report author does not have a conflict of interest in relation to this matter. The report authoriser does not have a conflict of interest in relation to this matter.

	If a conflict of interest exists, staff will not act in the matter, except as authorised by the CEO or Council (as the case requires).

15 RECEIVE & NOTE REPORTS

15.1 MARINE HAZARD WARNING SIGNS

Author: **Coordinator Recreation & Leisure**

Authoriser: **General Manager Community and Regulatory Services**

Attachments: **1. Marine Hazard Warning Sign Designs ⇩**

RECOMMENDATIONS

1. THAT the report entitled Marine Hazard Warning Signs be received and noted.

PURPOSE

The purpose of this report is to provide Council with an update on the installation of new marine hazard warning signs on Council land.

KEY ISSUES

- 41 beach access points along Lameroo Beach, Mindil Beach, Bundilla Beach, East Point Beach, Nightcliff Beach and Rapid Creek Beach were identified as missing signage or requiring updated signage relating to Marine Hazards.
- The signage design follows that of other jurisdictions and includes key elements of beach name, highest risk hazards within the beach, first aid information and Council regulations.
- Two different signage styles have been produced: Single Pole Signs (595mm x 380mm) and larger Dual Pole Signs (600mm x 1065mm).
- The design and content of the signs was developed in consultation with Surf Life Saving NT, Top End Health Service, Larrakia Nation and NT Water Safety Advisory Committee (NTWSAC).
- NT Department of Infrastructure, Planning and Logistics have provided funding for the production of the signs.
- City of Darwin will be responsible for installation of the signs, anticipated to be completed in November.

DISCUSSION

In September 2020, Council resolved to work with Northern Territory Government (NTG) to identify missing, and update existing, marine hazard warning signage along the municipality's coastline. Council officers were tasked with preparing this information to be provided to NTG with a request to fund this initiative.

In early October 2020, Council officers made initial contact with NT Parks & Wildlife and were provided their standard template for marine hazard warning signs. Contact was also made with NT Department of Health to clarify the first aid directions that should be provided on signage.

In late October 2020, Council's Recreation Team met with staff from Surf Life Saving NT (SLSNT), who in March 2018 had commissioned a coastal risk assessment report across City of Darwin, Casuarina Coastal Reserve and Gove Peninsula beaches.

Council officers and SLSNT staff then worked together to re-assess the recommended hazard warning signage for City of Darwin locations identified in the SLSNT report.

Sign Locations

SLSNT, in line with Surf Life Saving Australia guidelines, recommend all formal beach access points have warning signs, not just those beaches popular for swimming or water sports.

While the priority of this project was to identify locations missing hazard warning signage, a number of locations assessed had existing signs that were damaged or contained outdated information. These locations were included in Council officers' location list for new signage.

A number of locations within the municipality were identified as not being Council land, such as Casuarina Coastal Reserve and Little Mindil. Some of these locations such as Little Mindil and Cullen Bay also had maintenance works occurring, restricting access to the beach. All locations not on Council land were excluded from the project. These are proposed for future assessment by SLSNT and NT Parks & Wildlife, as they require agreement from the land-owner regarding the installation locations.

A total of 41 beach access points along Lameroo Beach, Mindil Beach, Bundilla Beach, East Point Beach, Nightcliff Beach and Rapid Creek Beach were identified as missing signage or requiring updated signage. The number of signs required along each beach is detailed below:

Beach Location	**Dual Pole**	**Single Pole**	**Total**
Lameroo Beach	0	2	2
Mindil Beach	0	7	7
Bundilla Beach	0	2	2
East Point Road	1	0	1
East Point Reserve	2	13	15
Nightcliff Beach	0	6	6
Rapid Creek Beach	3	5	8
Total	**6**	**35**	**41**

Sign Design

The signage designs included in the 2018 SLSNT coastal risk assessment were used as the basis for developing a design for marine hazard warning signs on City of Darwin land.

In line with the National Aquatic and Recreational Signage Style Manual, the signage design follows that of other jurisdictions, including Broome and Far North Queensland. Key elements of the design include:

- Beach name – to assist providing a location for emergency services.

- Highest risk hazards within the beach – e.g. crocodiles, slippery rocks.
- First aid and emergency services information.
- Regulations that apply to the beach e.g. no animals, no camping.

Two different signage styles have been produced:

- Dual Pole Signs – 600mm x 1065mm with wave shape edges mounted on black poles.
- Single Pole Signs – 595mm x 380mm walkway signs to be erected on a single pole.

At most beach access points, Single Pole Signs will be installed; however, where access points are quite wide, such as around the toilet block and playground at East Point, a larger Dual Pole Sign is required.

To develop the content for the signs, input was sought from key organisations:

- Senior Public Health Officer at Top End Health Service regarding the appropriate First Aid advice to be included.
- Larrakia Nation on the Larrakia names for Crocodile and Box Jellyfish to include on the signs.

Following input from the above organisations, the draft design was presented to the NT Water Safety Advisory Committee (NTWSAC) on Tuesday 2 March 2021 by the Executive Officer, SLSNT who took feedback during the meeting, and requested any further feedback be emailed to her by Friday 3 March 2021. Those present at the meeting indicated that they supported the design.

All requested changes from the NTWSAC were made, mainly formatting such as text colour and size.

The final design for the marine hazard warning signs is shown at **Attachment 1.**

Project costs

Design

City of Darwin provided funding for signage design work from the 2020-21 operational budget.

Supply

NTG Department of Infrastructure, Planning and Logistics has provided funding for the supply of all signs and materials.

- 6 Dual Pole Signs (approx. 600mm x 1065mm), with wave shape edges, including any caps and fixings.
- 12 black poles for Dual Pole Signs.
- 35 Single Pole signs (approx. 595mm x 380mm) including any caps/fixings.
- 35 poles for Single Pole Signs.

Removal and Installation

City of Darwin will be responsible for the installation of the signs including:

- Removal and disposal of 17 old signs
- Installation of 6 Dual Pole Signs.
- Installation of 35 Single Pole Signs.

City of Darwin's Civil Infrastructure team will coordinate the works.

Where possible, existing light and signage poles will be utilised for the new signs in the identified locations at Mindil Beach. Where existing poles are not unsuitable and a new pole is required, approval will be required from the Aboriginal Area Protection Authority before works can commence.

The installation of signage is expected to be completed in November, pending any approval requirements.

PREVIOUS COUNCIL RESOLUTION

At the 15 September 2020 meeting, Council resolved:

RESOLUTION ORD295/20

1. That Council work with the NTG to identify any missing and update existing educational hazardous marine environment signage throughout the municipality.
2. That Council provide in-kind support to erect any missing signage or signage that requires updating where requested as a joint activity.
3. That Council requests the NTG to fully fund this important marine safety initiative.
4. That this work be completed by 31 December 2020.

STRATEGIC PLAN ALIGNMENT	2 A Safe, Liveable and Healthy City 2.1 By 2030, Darwin will be a safer place to live and visit
CRITICAL DATES	Nil
BUDGET / FINANCIAL	**Budget/Funding:** Nil **Is Funding identified:** The cost for design and installation of the signs was funded through existing operational budget. The cost of supplying the signs was funded through Northern Territory Government. A breakdown of the project costs (inc. GST) is as follows:

Design	$737	CoD 2020-21 operational funds
Supply	$7,414	NTG DIPL funds
Installation	$7,750	CoD 2020-21 operational funds

RISK ASSESSMENT	**Assets & Infrastructure**	☑	**Environment & Waste** ☐
	Financial	☐	**Info Comms & Tech** ☐
	Legal & Compliance	☐	**Ops & Service Delivery** ☐
	Reputation & Brand	☑	**Work Health & Safety** ☐

In accordance with City of Darwin Risk Management Framework, the post treatment, mitigation risk is: Very Low

The new signs will become Council assets to maintain. Repair and replacement costs will need to be considered in ongoing operational budgets.

LEGISLATION / POLICY CONTROLS OR IMPACTS	**Legislation:** Nil **Policy:** Nil
RESOURCE IMPLICATIONS	External contractor has been engaged to install signage, Coordinator Civil Infrastructure to oversee the works.

CONSULTATION & ENGAGEMENT	**Engagement Level:** Discuss **Tactics:** Design and location of signage determined in partnership with Surf Life Saving NT. Consultation held with NT Department of Health and Parks & Wildlife to provide input into content of signs. Draft content presented to Larrakia Nation for input into the wording to be used. Draft design and content presented to NTWSAC for feedback. City of Darwin Manager Marketing and Communications provided signage design for approval.
COMMUNICATION PLAN FOR THIS INITIATIVE	Nil
PLACE SCORE STATEMENT	Nil
DECLARATION OF INTEREST	The report author does not have a conflict of interest in relation to this matter. The report authoriser does not have a conflict of interest in relation to this matter. If a conflict of interest exists, staff will not act in the matter, except as authorised by the CEO or Council (as the case requires).

DOUBLE POLE: approx 600mm x 1065mm
(height is top to bottom of curves, width is between poles - sign face only)

DOUBLE POLE: approx 600mm x 1065mm
(height is top to bottom of curves, width is between poles - sign face only)

S11
Rocksitters

S12
Rocksitters

S13
Nightcliff Beach

S14
Nightcliff Beach

S15
Nightcliff Beach

SINGLE POLE Signs: 380mm x 595mm

S16
Rapid Creek Beach

S17
Rapid Creek Beach

S18
Rapid Creek Beach

S1
Doctors Gully

S2
Lameroo Beach

S3
Mindil Beach

S4
Conacher Boat Ramp

S5
Bundilla Beach

SINGLE POLE Signs: 380mm x 595mm

S6
East Point Beach

S7
East Point Beach

S8
East Point Beach

S9
East Point Beach

S10
Rocksitters

15.2 YOUTH QUICK RESPONSE GRANT PROGRAM

Author: **Executive Manager Community and Cultural Services**

Authoriser: **General Manager Community and Regulatory Services**

Attachments: **1. Youth Quick Response Grants Guidelines ⇩**

RECOMMENDATIONS

1. THAT the report entitled Youth Quick Response Grant Program be received and noted.

PURPOSE

The purpose of this report is to inform Council of the process for Youth Quick Response Grant Program.

KEY ISSUES

- Council allocated $50,000 for quick response grants for youth programs in the Northern Suburbs in the 2021/2022 Municipal Plan.
- Officers have researched grant programs on offer by other tiers of Government for youth activity in the municipality and have also discussed a grant program with key contacts in the sector.
- The Youth Quick Response Grant Program has been designed to avoid duplication and to complement existing grant programs while working within existing resources.

DISCUSSION

Background

Council allocated $50,000 for quick response grants for youth programs in the Northern Suburbs in the 2021/2022 Municipal Plan as part of a suite of social budget initiatives in the areas of youth and arts.

In August 2021, Officers reviewed the approved initiatives and budget allocations, considered impact to service delivery, and assessed efficacy in delivering targeted outcomes.

In September 2021, research was undertaken into existing grant programs on offer by other tiers of Government and discussions were held with the sector to consider the best approach to allocate for allocation of funds during this trial period.

Consultation was undertaken with NTG officers including Office of Youth Affairs, Department of Territory Families, Housing and Communities, Territory Regional Growth and Department of Chief Minister and Cabinet. Members of the City of Darwin Youth Advisory Committee also provided input along with the DARWYWYN (Darwin Working with Youth Network) to identify funding priorities.

Consideration was given to the types of programs and activities and the timing and location of their delivery.

The Youth Quick Response Grant Program has been designed with the following objectives:

City of Darwin seeks to:

- Deliver within the resources and scope identified by Council
- Ensure participation in the process by Young people
- Avoid duplication with existing grant programs
- Align with City of Darwin's published Funding Guidelines
- Complement existing grant programs within City of Darwin or other tiers of Government
- Minimise any additional administrative burden
- Align with consultation findings from the development of the Youth Strategy (scheduled for presentation to Council at the Ordinary Meeting on 30 November)

Guidelines have been developed and circulated to promote these grants, **Attachment 1**. These guidelines sit alongside the broader City of Darwin Funding Guidelines. Information regarding the program is available on the City of Darwin website:

https://www.darwin.nt.gov.au/community/programs/grants-sponsorship/youth-grants

Approach

The Youth Quick Response Grant Program is designed for the purpose of community strengthening projects and initiatives that address emerging and critical issues facing young people. Applications should enhance Darwin as a safe, liveable, and healthy city and primarily benefit at-risk and vulnerable young people aged 12-25 who reside in the northern suburbs.

Published priorities for these grants are:

1. Programs for at risk and vulnerable young people on Friday and Saturday nights
2. Youth Programs in the northern suburbs (Chan, Richardson, and Waters wards)
3. Connecting young people with services and programs
4. Responding to an emerging or critical issue

Grant amounts are offered between $2,000 and $5,000 and, as a quick response program, applications will be accepted monthly until the allocation is fully expended. Applications are via the Smartygrants platform and due on the 1st of each month with notification of outcomes provided within four weeks of the monthly deadline.

Youth Quick Response Grant applications will be assessed via the Smartygrants platform. A panel consisting of the Coordinator of Youth Programs, Youth Engagement Officer and the Executive Manager of Community and Culture will assess applications with input from members of the Youth Advisory Committee where appropriate. Recommendations will be made for approval by General Manager of Community and Regulatory Services under delegation from the Chief Executive Officer

A further report will be presented to Council on the outcome of the Youth Quick Response Grant Program.

PREVIOUS COUNCIL RESOLUTION

At the 13 April Ordinary meeting Council resolved:

RESOLUTION ORD173/21

1. THAT the report entitled Social Budget Initiatives be received and noted.
2. THAT Council refer an increase to the Community Grants Program of $100,000 to the 2021/22 annual budget process and that the budget to be allocated as follows:
   (a) $50,000 for quick response grants for Youth Programs in the Northern Suburbs
   (b) $40,000 for an Arts and Cultural Development grant program
   (c) $10,000 for the delivery of Busk a Move program.

STRATEGIC PLAN ALIGNMENT	5 A Vibrant and Creative City 5.2 By 2030, Darwin will be a more connected community and have pride in our cultural identity
CRITICAL DATES	Youth Quick Response Grant rounds will close on the 1st of each month. The October round is now open with applications for this month to close on 1 November. Monthly applications will be open until March 2022 unless funds are fully expended prior.
BUDGET / FINANCIAL	**Budget/Funding:** $50,000 **Is Funding identified:** Allocated in the 2021/22 Municipal Plan. There is no ongoing budget for this initiative currently.
RISK ASSESSMENT	**Assets & Infrastructure** ☐ **Environment & Waste** ☐ **Financial** ☐ **Info Comms & Tech** ☐ **Legal & Compliance** ☐ **Ops & Service Delivery** ☐ **Reputation & Brand** ☑ **Work Health & Safety** ☐ In accordance with City of Darwin Risk Management Framework, the post treatment, mitigation risk is: Low Risks identified, in relation to this report, will be managed through clear communication with the sector. Grant rounds will be managed through the online Smartygrants platform as per City of Darwin's

	Funding Guidelines.
LEGISLATION / POLICY CONTROLS OR IMPACTS	Nil
RESOURCE IMPLICATIONS	Nil
CONSULTATION & ENGAGEMENT	**Engagement Level:** Discuss **Tactics:** Discussion with relevant officers in NTG Departments, members of the Youth Advisory Committee and members of DARWWYN (Darwin
COMMUNICATION PLAN FOR THIS INITIATIVE	**External** Marketing and Communications team have updated website with relevant information including links to Smartygrants and guidelines. Youth team have circulated information via LAUNCH social media platforms and networks.
PLACE SCORE STATEMENT	Youth Quick Response Grants have the capacity to support the strengthening of social ties and support networks in local communities.
DECLARATION OF INTEREST	The report author does not have a conflict of interest in relation to this matter. The report authoriser does not have a conflict of interest in relation to this matter. If a conflict of interest exists, staff will not act in the matter, except as authorised by the CEO or Council (as the case requires).

City of Darwin
Funding Guidelines

Quick Response Youth Engagement Grants

City of Darwin's Quick Response Youth Engagement Grants are a one-off initiative to fund community strengthening projects and initiatives that address key issues facing young people.

Minimum Request	Purpose	Frequency
$2,000 **Maximum Request** $5,000 Total Pool $50,000	Enhance Darwin as a safe, liveable and healthy city and primarily benefit at-risk and vulnerable young people aged 12-25 who reside in the northern suburbs	Monthly from 1 November (until expended)

Assessment Process

As a quick response grant program, applications will be accepted monthly until the total pool of funds is expended.

- Applications will be accepted from 4 October 2021 to 1 March 2022.
- Applications are due on the first of each month with 1 November being the first closing date and 1 March being the last, unless the grant funds are expended earlier.
- Applicants will be notified of their success or otherwise within four weeks of each monthly deadline.

Priorities

Applications should identify which of the following priorities they address:

- Programs for at risk and vulnerable young people on Friday and Saturday nights
- Youth programs in the northern suburbs (Chan, Richardson and Waters wards)
- Connecting young people with services and programs
- Response to an emerging or critical issue

Assessment Criteria

Applications will be assessed using the following criteria:

- That the project meets the purpose and priorities of the Youth Engagement Grants Program
- That there is a clearly demonstrated need for the project
- How likely the proposed project is to deliver on its stated outcomes
- How well the project aligns to City of Darwin's Strategic Plan, Youth Strategy and/or other Council strategies and plans

Eligibility

Applications that fit within the following eligibility guidelines will be considered for funding.

- Applicants must be an incorporated not-for-profit organisation or be auspiced by an incorporated organisation for the purpose of this application.
- Projects must be delivered within three months of notification.
- Programs must occur within the Darwin municipality and be undertaken by Darwin based enterprises for the benefit of the Darwin community.
- Applicants need to be able to demonstrate alignment between their proposal and the priorities of Council, and those of the Quick Response Youth Engagement Grants Program.
- Projects should demonstrate financial viability and value for money.
- The responsible organisation needs to have the appropriate type and level of insurance for the activities that are the subject of the grant.
- Funding will only be granted for specific project costs and not for the core costs of running an existing organisation.

Applicants are ineligible who:

- Have not satisfactorily acquitted previous funding within the specified timelines or owe money to City of Darwin
- Have received funding from City of Darwin for this project in the past
- Do not reflect the values of City of Darwin or that breach our access and inclusion policy or other relevant policies
- Canvas or lobby staff or Elected Members outside the official processes
- Propose projects of a political nature

Other Requirements

Successful applicants will be required to:

- Sign a service agreement with City of Darwin that details the commitments between the community group or organisation and Council
- Seek written permission from Council to alter the agreement, including changes to major items purchased or the timelines of the project
- Submit an acquittal online through SmartyGrants within one month of the project's completion

More Information

Potential applicants are strongly encouraged to discuss applications with the responsible officer prior to submission.

Email: youthprojects@darwin.nt.gov.au
Phone: 08 8930 0403

All applications must be submitted via **darwin.smartygrants.com.au**

Funding Guidelines 2021-2024, a publication outlining City of Darwin's range of funding and support opportunities can be found at -

www.darwin.nt.gov.au/council/about-council/publications-and-forms/funding-guidelines

15.3 MONTHLY FINANCIAL REPORT -SEPTEMBER 2021

Author: **Executive Manager Finance**
Senior Accountant

Authoriser: **Chief Financial Officer**

Attachments: **1. Monthly Financial Report - September 2021** ⇩

RECOMMENDATIONS

THAT the report entitled Monthly Financial Report – September 2021 be received and noted.

PURPOSE

The purpose of this report is to provide a summary of the financial position of Council for the period ended 30 September 2021.

Further, this report and the contents are required to be presented to Council in compliance with the Local Government (Accounting) Regulations 2019.

KEY ISSUES

The financial report is an abridged report, as the 2020/21 Annual Financial Statements were still being audited at the 30 September 2021. Consequently, there may be adjustments which may impact the Statement of Financial Position.

The Monthly Financial Report includes:

- Income Statement, which compares actual income and expenditure against amended budget.
- Investments and Receivables Report, which provides details of Treasury activities, Investments and Debtors.

DISCUSSION

September 2021 – Year to Date Result

The operating result for September 2021 YTD is a **deficit of ($4.1M)**. **Budget ($5,198**).

With there being no capital income received yet the Net Surplus/(Deficit) is **($4.1M)** against a YTD budget **deficit of ($4.1M),** hence Nil variance overall

	YTD Actual $'000	YTD Budget $'000	Variance $'000
Net Surplus/ (Deficit)	**(4,050)**	**(4,050)**	**Nil Favourable**

Commentary

The 30 June 2021 draft Annual Financial Statements are currently being audited by our external auditors and therefore still not considered final.

This net operating result of ($4,050K) deficit is better than our expected results by $1,148K. This is mainly due to User Fees and Charges, in Waste, being higher than anticipated by $708K and Materials & Contracts being lower than anticipated by $675K. Also, of note is the Operating Grants & Subsides income being below budget by $461K. This will be rectified in the October report on the updating of the budgets to include the approved carry forward accounts.

We note that our internal accounting conventions, for monthly reporting, currently recognise the Council Rates that attributable to that month and for YTD and then progressively throughout the year.

The overall Net Income Statement position is right on budget. At this early point in the year there are no significant matters requiring comment.

JUNE 2021 – Audited General Purpose Financial Statements

The 30 June 2021 Financial Statements have been prepared and are being audited, any audit year-end adjustments are still being considered and may be processed as required.

Treasury Comment

The national economic data released in September was positive, however the economic data is "backward-looking" and thus the full impact of the ongoing COVID lockdowns are yet to be felt economically. The RBA has not changed their monetary policy settings.

City of Darwin has achieved 0.38% on weighted average interest rate on its August investment portfolio of $107.8M. There have been no investment policy breaches in this month.

Accounts Receivable (Debtors)

This section considers the receipt timing of Rates collection and any general Debtors outstanding. The performance on Rates recovery is compared to the prior year. The report also includes information on, aged debtors including general debtors, infringements, and Rates arrears.

Accounts Payable (Creditors)

The total payments made for the month of September 2021 were $11,996,904 and the Accounts Payable owing at the 30 September 2021 was $1,620,920. All the accounts payables were aged less than 30 days.

The Council has met its payment and reporting obligations for GST, fringe benefits tax, PAYG withholding tax, superannuation, and insurance for the month of September 2021.

PREVIOUS COUNCIL RESOLUTION N/A	
STRATEGIC PLAN ALIGNMENT	6 Governance Framework 6.3 Decision Making and Management
CRITICAL DATES	N/A
BUDGET / FINANCIAL	N/A
RISK ASSESSMENT	**Assets & Infrastructure** ☐ **Environment & Waste** ☐ **Financial** ☑ **Info Comms & Tech** ☐ **Legal & Compliance** ☑ **Ops & Service Delivery** ☐ **Reputation & Brand** ☐ **Work Health & Safety** ☐ In accordance with City of Darwin Risk Management Framework, the post treatment, mitigation risk is: Very Low
LEGISLATION / POLICY CONTROLS OR IMPACTS	Part 2 Division 7 the *Local Government (General) Regulations 2021* require that a monthly financial report is presented to Council each month setting out: (a) the actual income and expenditure of the council for the period from the commencement of the financial year up to the end of the previous month; and (b) the most recently adopted annual budget; and (c) details of any material variances between the most recent actual income and expenditure of the council and the most recently adopted annual budget This report remains in compliance with the requirements of the *Local Government Act 2008 and Regulations* and is being transitioned to the new requirements of the *Local Government Act 2019*. This report is considered to be of a higher level of statutory compliance as outlined above.
RESOURCE IMPLICATIONS	N/A
CONSULTATION & ENGAGEMENT	N/A
COMMUNICATION PLAN FOR THIS INITIATIVE	N/A
PLACE SCORE STATEMENT	N/A

DECLARATION OF INTEREST	The report authors do not have any conflicts of interest in relation to this matter. The report authoriser does not have a conflict of interest in relation to this matter. If a conflict of interest exists, staff will not act in the matter, except as authorised by the CEO or Council (as the case requires).

Income Statement

For the Period Ended 30 September 2021

	2021/22						
	YTD Sep 2021 Actual $'000		YTD Sep 2021 Amended Budget $'000		YTD Variance $'000	FY Original Budget $'000	FY Amended Budget $'000	YTD Act v Amend Budget %
Operating Income								
Rates & Annual Charges	19,199	69%	19,166	70%	33	76,666	76,666	100%
Statutory Charges	699	3%	689	3%	10	2,358	2,358	101%
User Fees & Charges	6,391	23%	5,683	21%	708	21,769	21,769	112%
Operating Grants & Subsidies	575	2%	1,037	4%	(461)	5,578	5,578	55%
Interest / Invetment Income	191	1%	278	1%	(87)	1,113	1,113	69%
Other Income	649	2%	590	2%	59	1,780	1,780	110%
Total Income	**27,705**		**27,443**		**262**	**109,264**	**109,264**	**101%**
Operating Expenses								
Employee Expenses	9,301	34%	9,347	34%	46	37,504	37,504	100%
Materials & Contracts	14,145	51%	14,821	54%	675	49,941	49,941	95%
Elected Member Allowances	146	1%	183	1%	37	733	733	80%
Elected Member Expenses	35	0%	16	0%	(19)	64	64	219%
Depreciation, Amortisation & Impairment	8,029	29%	8,180	30%	151	32,720	32,720	98%
Interest Expenses	98	0%	94	0%	(4)	2,350	2,350	105%
Total Expenses	**31,755**		**32,641**		**886**	**123,312**	**123,312**	**97%**
Budgeted Operating Surplus/ (Deficit)	**(4,050)**		**(5,198)**		**1,147**	**(14,048)**	**(14,048)**	**78%**
Capital Grants & Contributions Income	-		1,148		(1,148)	12,173	12,173	0%
Net Surplus/(Deficit)	**(4,050)**		**(4,050)**		**(0)**	**(1,875)**	**(1,875)**	**100%**

INVESTMENTS REPORT TO COUNCIL
AS AT
30 September 2021

Investment Distribution by Term to Maturity

Term to Maturity Policy Limits
There have been no breaches in Term to Maturity Policy limits for the month of September 2021

Term to Maturity Category	% of Total Portfolio	Term to Maturity (Policy Max.)	Term to Maturity (Policy Min.)
Less than 1 Year			
Term Deposits	77%		
Business Online Saver Accounts	18%		
Floating Rate Notes	0%		
Less than 1 Year Total	**96%**	**100%**	**30%**
Greater than 1 Year less than 3 Years			
Term Deposits	0%		
Business Online Saver Accounts	0%		
Floating Rate Notes	3%		
Greater than 1 Year less than 3 Years Total	**3%**	**50%**	**0%**
Greater than 3 Years			
Term Deposits	0%		
Business Online Saver Accounts	0%		
Floating Rate Notes	1%		
Greater than 3 Years Total	**1%**	**30%**	**0%**
Greater than 5 Years			
Term Deposits	0%		
Business Online Saver Accounts	0%		
Floating Rate Notes	0%		
Greater than 5 Years	**0.00%**	**10%**	**0%**
Total	**100.00%**		

Investment Distribution by Portfolio Credit Rating

Portfolio Distribution Credit Rating Limits
There have been no breaches in Portfolio Credit Rating Limits for the month of September 2021

Credit Rating - Maximum Individual Limit	ADI	Counterparty	% of Total Portfolio	Individual Counterparty Limits of Total Investments
AA-	Commonwealth Bank of Australia Ltd	Commonwealth Bank of Australia Ltd	**35.85%**	**50.00%**
	National Australia Bank Ltd	National Australia Bank Ltd	**26.05%**	**50.00%**
	Westpac Banking Corporation Ltd	BankSA	**13.71%**	**50.00%**
	Westpac Banking Corporation Ltd	Westpac Banking Corporation Ltd	**1.01%**	**50.00%**
A+	Macquarie Bank	Macquarie Bank	**1.01%**	**30.00%**
	Suncorp Metway Limited	Suncorp Bank	**4.56%**	**30.00%**
BBB+	Bank of Queensland Ltd	Bank of Queensland Ltd	**6.13%**	**10.00%**
	Bendigo & Adelaide Bank Ltd	Bendigo & Adelaide Bank Ltd	**7.63%**	**10.00%**
BBB	Teachers Mutual Bank Limited	Teachers Mutual Bank Limited	**1.01%**	**10.00%**
	AMP Bank Ltd	AMP Bank Ltd	**3.04%**	**10.00%**
Grand Total			**100.00%**	

Credit Rating - Maximum Portfolio Limit	% of Total	Policy Limit
AAA to AA-	**77%**	**100.00%**
A+ to A-	**6%**	**45.00%**
BBB+ to BBB	**18%**	**30.00%**
Total	**100.00%**	

INVESTMENT REPORT TO COUNCIL
AS AT
30 September 2021

Institution Category	Counterparty	Maturity Date	Interest Rate	Credit Rating (LT)	Credit Rating (ST)	Inv Type	FRN ONLY (Maturity Date - last pmt)	Principal $	% Portfolio
MAJOR BANK	BankSA	26 October 2021	0.35%	AA-	A1+	TD		$1,500,000	1.52%
		26 April 2022	0.37%	AA-	A1+	TD		$3,007,249	3.04%
		17 May 2022	0.37%	AA-	A1+	TD		$1,500,000	1.52%
		24 May 2022	0.37%	AA-	A1+	TD		$1,514,544	1.53%
		14 June 2022	0.37%	AA-	A1+	TD		$1,524,041	1.54%
		3 May 2022	0.32%	AA-	A1+	TD		$1,500,000	1.52%
		23 August 2022	0.37%	AA-	A1+	TD		$3,003,423	3.04%
	BankSA Total							$13,549,258	13.71%
	Commonwealth Bank of Australia Ltd	26 October 2021	0.40%	AA-	A1+	TD		$1,500,000	1.52%
		23 November 2021	0.40%	AA-	A1+	TD		$1,500,000	1.52%
		18 January 2022	0.34%	AA-	A1+	TD		$1,500,000	1.52%
		18 January 2022	0.38%	AA-	A1+	TD		$1,500,000	1.52%
		22 February 2022	0.35%	AA-	A1+	TD		$1,500,000	1.52%
		22 February 2022	0.41%	AA-	A1+	TD		$1,500,000	1.52%
		22 March 2022	0.36%	AA-	A1+	TD		$1,500,000	1.52%
		15 February 2022	0.34%	AA-	A1+	TD		$1,500,000	1.52%
		11 October 2021	1.16%	AA-	A1+	FRN	11 January 2024	$1,000,000	1.01%
		7 December 2021	0.30%	AA-	A1+	TD		$1,500,000	1.52%
		25 January 2022	0.34%	AA-	A1+	TD		$1,500,000	1.52%
		23 August 2022	0.43%	AA-	A1+	TD		$1,503,717	1.52%
		26 July 2022	0.42%	AA-	A1+	TD		$1,500,000	1.52%
		5 October 2021	0.20%	AA-	A1+	BOS		$16,425,054	16.62%
	Commonwealth Bank of Australia Ltd Total							$35,428,770	35.85%
	National Australia Bank Ltd	26 October 2021	0.50%	AA-	A1+	TD		$5,536,684	5.60%
		23 November 2021	0.50%	AA-	A1+	TD		$3,000,000	3.04%
		22 February 2022	0.32%	AA-	A1+	TD		$1,536,592	1.55%
		22 March 2022	0.34%	AA-	A1+	TD		$1,500,000	1.52%
		26 April 2022	0.32%	AA-	A1+	TD		$1,513,873	1.53%
		26 April 2022	0.33%	AA-	A1+	TD		$1,500,000	1.52%
		17 May 2022	0.34%	AA-	A1+	TD		$1,529,073	1.55%
		17 May 2022	0.31%	AA-	A1+	TD		$1,515,938	1.53%
		19 April 2022	0.30%	AA-	A1+	TD		$1,539,554	1.56%
		19 April 2022	0.31%	AA-	A1+	TD		$2,000,000	2.02%
		24 May 2022	0.32%	AA-	A1+	TD		$3,057,863	3.09%
		14 June 2022	0.35%	AA-	A1+	TD		$1,513,912	1.53%
	National Australia Bank Ltd Total							$25,743,489	26.05%
	Westpac Banking Corporation Ltd	25 October 2021	1.17%	AA-	A1+	FRN	24 April 2024	$1,000,000	1.01%
	Westpac Banking Corporation Ltd Total							$1,000,000	1.01%
MAJOR BANK Total								$75,721,517	76.62%
OTHER	AMP Bank Ltd	26 October 2021	0.65%	BBB	A2	TD		$1,500,000	1.52%
		30 November 2021	0.65%	BBB	A2	TD		$1,500,000	1.52%
	AMP Bank Ltd Total							$3,000,000	3.04%
	Bank of Queensland Ltd	23 November 2021	0.53%	BBB+	A2	TD		$1,520,809	1.54%
		30 November 2021	0.40%	BBB+	A2	TD		$1,529,940	1.55%
		30 November 2021	0.42%	BBB+	A2	TD		$1,503,245	1.52%
		23 August 2022	0.39%	BBB+	A2	TD		$1,506,133	1.52%
	Bank of Queensland Ltd Total							$6,060,126	6.13%
	Bendigo & Adelaide Bank Ltd	18 January 2022	0.35%	BBB+	A2	TD		$1,500,000	1.52%
		22 February 2022	0.35%	BBB+	A2	TD		$1,500,000	1.52%
		22 March 2022	0.35%	BBB+	A2	TD		$3,037,960	3.07%
		15 February 2022	0.35%	BBB+	A2	TD		$1,500,000	1.52%
	Bendigo & Adelaide Bank Ltd Total							$7,537,960	7.63%
	Macquarie Bank	12 November 2021	0.85%	A+	A1	FRN	6 February 2025	$1,000,000	1.01%
	Macquarie Bank Total							$1,000,000	1.01%
	Suncorp Bank	19 April 2022	0.33%	A+	A1	TD		$1,502,088	1.52%
		3 May 2022	0.32%	A+	A1	TD		$1,500,000	1.52%
		7 June 2022	0.32%	A+	A1	TD		$1,500,000	1.52%
	Suncorp Bank Total							$4,502,088	4.56%
	Teachers Mutual Bank Limited	28 October 2021	0.92%	BBB	A2	FRN	28 October 2022	$1,000,000	1.01%
	Teachers Mutual Bank Limited Total							$1,000,000	1.01%
OTHER Total								$23,100,175	23.38%
Grand Total								$98,821,692	100.00%

N.B.

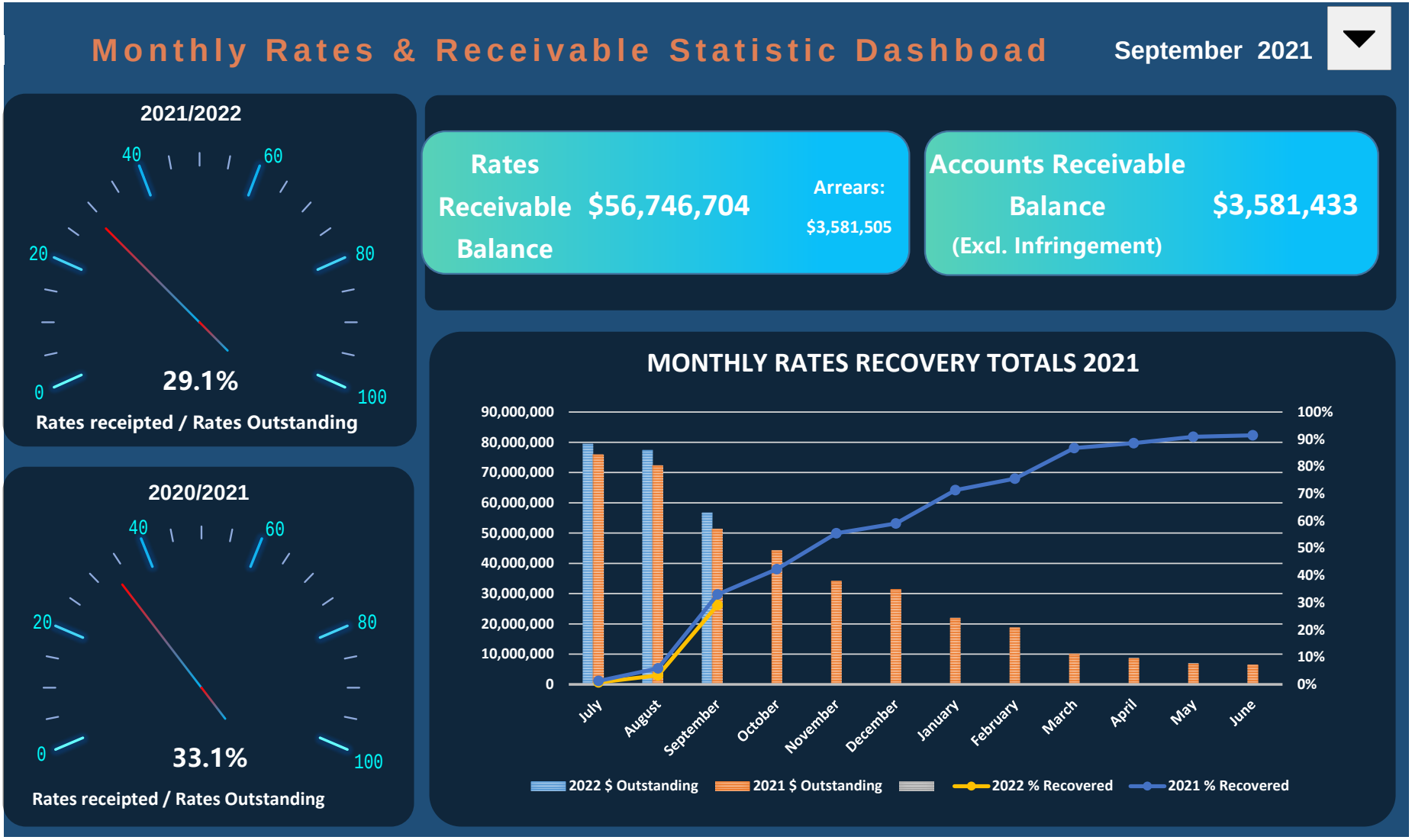
**INV TYPE - FRN = interest rate is the 'Coupon Margin' established on issue date, this plus 3M BBSW provides the yield for the current coupon period.*

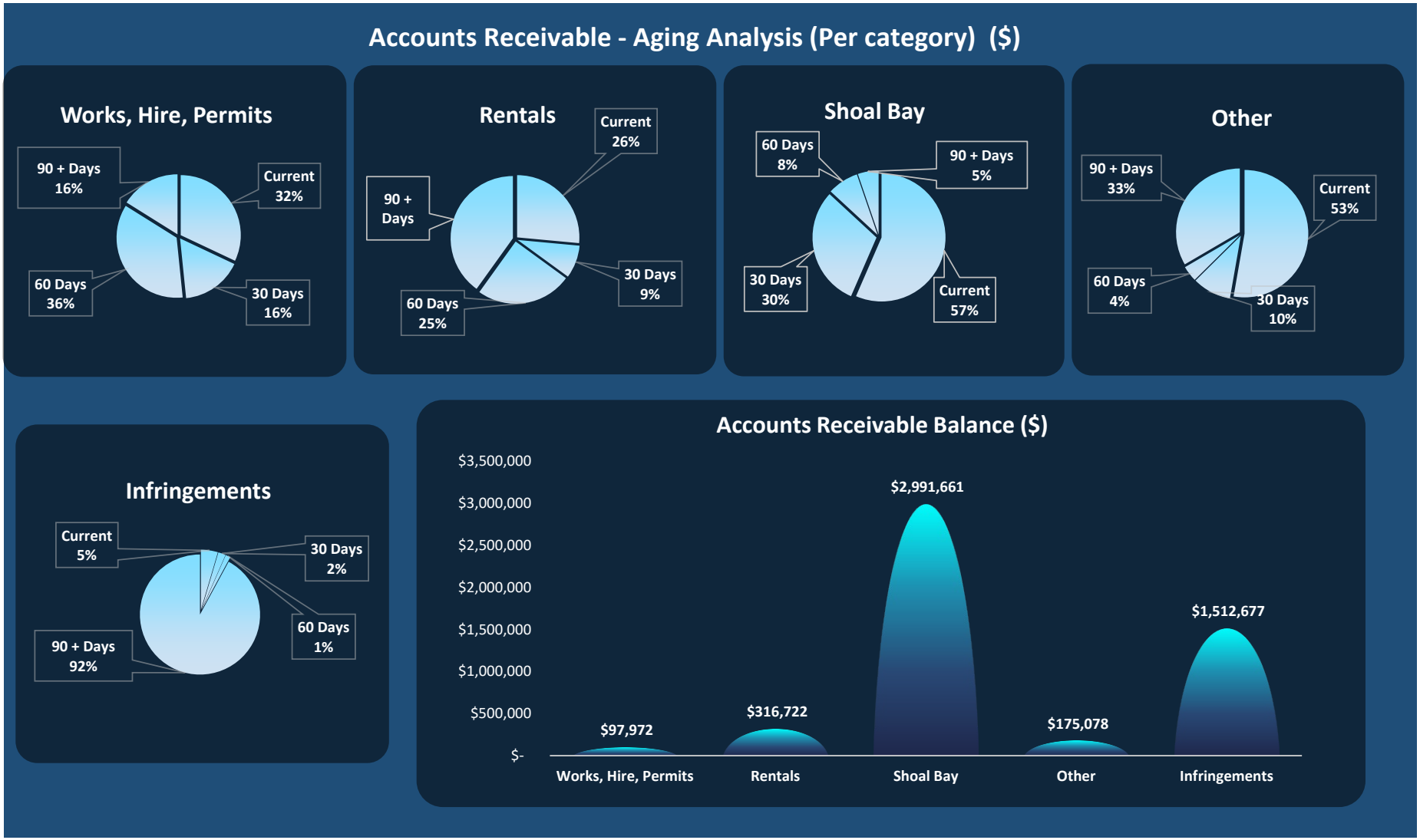
**MATURITY DATE - FRN = the interest coupon payment date not actual FRN maturity date (paid every 91 days).*

General Bank Funds	**$11,157,159**
Total Funds	**$109,978,852**
Total Budgeted Investment Earnings	**$812,937**
Year to Date Investment Earnings	**$92,350**
Weighted Ave Rate	**0.38%**
BBSW 90 Day Rate	**0.02%**
Bloomberg AusBond (Bi	**0.01%**

Council has an arrangement with its financial institution the Commonwealth Bank of Australia to offset Council's overdraft facility against pooled funds held in Council's Trust Account and General Account

Trust Bank Account	**$456,989**


Monthly Rates & Receivable Statistic Dashboad
September 2021
2021/2022
29.1%
Rates receipted / Rates Outstanding
2020/2021
33.1%
Rates receipted / Rates Outstanding
Rates Receivable Balance
$56,746,704
Arrears:
$3,581,505
Accounts Receivable Balance (Excl. Infringement)
$3,581,433
MONTHLY RATES RECOVERY TOTALS 2021
2022 $ Outstanding
2021 $ Outstanding
2022 % Recovered
2021 % Recovered


Accounts Receivable - Aging Analysis (Per category) ($)
Works, Hire, Permits
90 + Days 16%
Current 32%
60 Days 36%
30 Days 16%
Rentals
Current 26%
90 + Days
30 Days 9%
60 Days 25%
Shoal Bay
60 Days 8%
90 + Days 5%
30 Days 30%
Current 57%
Other
90 + Days 33%
Current 53%
60 Days 4%
30 Days 10%
Infringements
Current 5%
30 Days 2%
60 Days 1%
90 + Days 92%
Accounts Receivable Balance ($)
$3,500,000
$3,000,000
$2,500,000
$2,000,000
$1,500,000
$1,000,000
$500,000
$-
$97,972
$316,722
$2,991,661
$175,078
$1,512,677
Works, Hire, Permits
Rentals
Shoal Bay
Other
Infringements

15.4 TREE REMOVALS IN MULTIPLE LOCATIONS

Author: **Executive Manager Operations**
Senior Coordinator Parks & Reserves

Authoriser: **Acting General Manager Engineering and City Services**

Attachments:
1. **Draft Tree Management Plan ⇩**
2. **Establishing a Resilient Urban Forest for Darwin ⇩**
3. **Preferred Trees for Darwin ⇩**

RECOMMENDATIONS

1. THAT the report entitled Tree Removals in Multiple Locations be received and noted.

PURPOSE

The purpose of this report is to provide council with information regarding the status of African Mahogany trees (Khaya senegalensis) within the Darwin Municipality

KEY ISSUES

- African Mahogany trees are not subject to specific management actions on the basis of their species alone.
- The City of Darwin has a draft tree management plan that drives council's decision-making process with regard to tree management. Trees are assessed based on qualified arboricultural assessment of a number of qualitive criteria against a risk assessment matrix.
- Council does not currently have a succession plan for the removal of African Mahogany trees.

DISCUSSION

At the 1st Ordinary Council meeting in February 2021 council resolved to deliver a report to council on the current status of African Mahogany trees within the Darwin municipality. The City of Darwin currently manages in excess of 300 African Mahogany trees, the last of which were planted in 1996.

Currently, African Mahogany trees are managed under councils Draft Tree Management Plan (**Attachment 1**), in the same manner as every other species of tree. Trees in identified high-risk locations are inspected biannually by qualified arborists, while trees in low-risk locations are inspected on an ad-hoc basis as the result of customer requests. The Tree Re-establishment Advisory Committee (**Attachment 2**) considered African Mahogany trees as part of their guidelines for re-establishing a resilient urban forest in Darwin and added the species to the "not to be planted" list in the endorsed document Preferred Trees for Darwin (**Attachment 3**).

Currently African Mahogany trees are not managed under any specific regime, but under the same risk-based methodology as every other species in the Darwin Municipality, and there is no endorsed action from council to do so, nor any endorsed program for the removal and subsequent replacement of these trees.

PREVIOUS COUNCIL RESOLUTION

At the 9 February 2021 Ordinary Meeting Council resolved:

27.1 TREE REMOVALS IN MULTIPLE LOCATIONS

RESOLUTION ORD042/21

Moved: Alderman Andrew Arthur
Seconded: Alderman Rebecca Want de Rowe

Question
Alderman Andrew Arthur asked if the Mahogany on Virginia Crescent in Anula will be removed tomorrow.

Answer
The General Manager Engineering & City Services confirmed that it would.

Lord Mayor also provided advice that the mahogany tree in Nightcliff Village (Pavonia Place) will also be removed as it poses a safety risk to the public.

The General Manager Engineering & City Services advised multiple arborists reports have been completed including an independent investigation and sonar inspection which confirmed the tree carries a high risk rating. Engineering and City Services have scheduled the removal for early next week following advice to constituents in the area.

Question

Alderman Andrew Arthur queried an update on a report to return to Council on a succession plan for Mahogany trees.

Answer

Lord Mayor confirmed a report will be delivered to Council on the status of Mahogany Trees.

The Chief Executive Officer acknowledged the significant work of Engineering & City Services staff undertaking tree investigations across the municipality.

CARRIED 11/0

STRATEGIC PLAN ALIGNMENT	2 A Safe, Liveable and Healthy City 2.1 By 2030, Darwin will be a safer place to live and visit

CRITICAL DATES	N/A
BUDGET / FINANCIAL	**Budget/Funding:** N/A **Is Funding identified:** N/A
RISK ASSESSMENT	**Assets & Infrastructure** ☐ **Environment & Waste** ☐ **Financial** ☐ **Info Comms & Tech** ☐ **Legal & Compliance** ☐ **Ops & Service Delivery** ☐ **Reputation & Brand** ☐ **Work Health & Safety** ☐ In accordance with City of Darwin Risk Management Framework, the post treatment, mitigation risk is:
LEGISLATION / POLICY CONTROLS OR IMPACTS	**Legislation:** Nil **Policy:** Policy 50 – Trees on verges, Conservation Policy 51 - Verges
RESOURCE IMPLICATIONS	Nil
CONSULTATION & ENGAGEMENT	Nil
COMMUNICATION PLAN FOR THIS INITIATIVE	Nil
PLACE SCORE STATEMENT	**Celebrate Darwin's unique climate, vegetation, and natural features as an authentic point of difference.**
DECLARATION OF INTEREST	The report author does not have a conflict of interest in relation to this matter. The report authoriser does not have a conflict of interest in relation to this matter. If a conflict of interest exists, staff will not act in the matter, except as authorised by the CEO or Council (as the case requires).

TREE MANAGEMENT PLAN.

Foreword.

Trees can survive in in a built environment but only if the system by which the tree lives is not impaired by the development that it is supposed to enhance.

Definition of Forest: A large area dominated by trees (Wikipedia)

A forest is a complex, biodiverse system that is:

- Regenerative
- Self sustaining
- Unregulated
- Resilient
- Inter-dependent – plants, insects, microbes, mycorrhiza, invertebrates, birds and animals

Definition of Urban Forest: A densely wooded area located in a city (Oxford Dictionary)

Within the City of Darwin there are a limited number of parks and some suburban streets that may qualify as an "Urban Forest". Mostly, the tree-scapes in Darwin are limited to individual trees planted at various intervals along the street verges and in some median strips.

In recent times, the tree plantings of the more upright species have been preferred with the result that canopy cover is restricted and does not extend across streets or footpaths so that much of the benefits associated with an "Urban Forest" is lost in that the trees are not assisting in lowering the heat island effect and are more ornamental than functional. Whereas they should be both.

The conventional practice of over pruning to "manage" tree health and public safety is also reducing the canopy effect and reducing trees useful life expectancy (ULE).

With the introduction of the NEMUS Tree Management System all of the individual trees within the City precincts can be identified and monitored, with all new plantings recorded at planting and monitored throughout their life time.

With access to reliable, retrievable, long term data, good design and planning of tree placement the City of Darwin will not only be better able to manage its present tree stocks but ensure that the "Urban Forest" concept with all of the associated benefits can be a reality in the future.

"*Trees are one of the most cost-effective means to reduce urban heat island effects and transform our urban environments to create prosperous, livable cities. However, in less than two decades, Darwin will have lost one in two street trees due to age and natural decline. On top of this, new developments and increased population densities will result in major tree losses from private land. When considering this in combination with our tropical climate, forecast temperature increases and the known heat island effect, we can expect the maximum temperature in the CBD by two to five degrees within thirty years. The energy cost associated with such a temperature increase would be significant.*

The role of trees in controlling the microclimate and reversing this effect is recognized as a cost-effective approach. But to be most effective, it requires a complete re-think of how trees are viewed in Darwin and particularly central Darwin. For example, instead of seeing trees as ornaments, we need to see them as critical infrastructure. Rather than thinking of them as having no monetary worth, we need to recognize their economic value. We need to focus on overall tree canopies rather than individual trees." (extract from Cooling a Tropical City by Tony Cox and Lawrence Nield)

TREE MANAGEMENT PLAN.

Introduction.
The costs, financial and social of not managing trees correctly can be high. Trees, just like any other infrastructure, need to be managed to maximize their benefits, minimize any adverse effects and control the costs. Trees are biological assets which do not always behave in the way man would necessarily like, are prone to many factors outside the control of the tree owner, their life cycle can vary enormously, cannot be accurately predicted and requires on-going evaluation.

Trees take many years to reach maturity and provide maximum benefits to the community and the local ecology. The retention and protection of mature trees in particular is vital in an expanding and ever changing urban environment as they cannot be easily replaced.
The overall tree asset is made up of thousands of individual components, each of which behaves very differently.

The greening of Darwin commenced in 1975 after the city was devastated by Cyclone Tracy. The Darwin Reconstruction Commission, in conjunction with the NT Government, City of Darwin and various community groups planted many thousands of trees throughout Darwin, especially in the northern suburbs. Many unsuitable tree species were planted and this continued in an ad hoc manner throughout the 1970's and 80's with the result that the City of Darwin has now for some time been dealing with the resultant problems including;

- Damage caused by root systems to footpaths, roads, driveways, fences, buildings and underground services
- Limb failure causing damage to cars, homes and other infrastructure
- Whole tree failure due to inadequate or incorrect planting techniques
- Large trees planted under aerial services including power lines
- Over planting in parks causing phototropism
- Structural defects in trees caused by lack of formative pruning.

Management (or lack of) of the tree asset was for many years generally detrimental to the long term health and structure of the trees due in a large part to the acute shortage of qualified Arborists in Darwin and a general lack of understanding and/or knowledge of the need for proper arboricultural techniques to be used when managing trees.

The cost of not correctly managing a large tree asset can be significant.

Many tree management practices in the past have been based on short term goals and "people needs" rather than "tree needs". This is changing and Arboriculture as a science has progressed significantly in recent years and the City of Darwin is embracing this change by employing and training Arborists up to Diploma Level. There is now a scientific basis and understanding of tree physiology, branch and trunk structure, wound response, root growth and correct pruning and maintenance techniques.

There is insufficient detailed information on the total number, species and condition of the tree population in Darwin. While some data on the councils trees has been collected and recorded it is not readily retrievable and not at all in the field. This is inefficient and steps are being taken to rectify the problem.

An asset cannot be effectively managed if the manager does not have detailed information on the asset. An inventory of all trees including location, size, species, condition, defect profile and site conditions provides the basis for making informed decisions. It is also essential to be able to interrogate the data and keep the information up to date.

In 2016 the City of Darwin, engaged the services of Arboricultural Consultant, Bill Sullivan, to review the Council's procedures, strategies, and work practices and to develop a comprehensive Tree Management Plan from planting to maturity and beyond

One of the key findings of the review was that Council did not have an effective tree data base from which data could be entered and retrieved in the field. This deficiency meant that Council Arborists had no historical

data to assist with managing tree stocks and when assessing trees during regular inspections the Arborist had to re-enter all relevant data at every inspection. This was time consuming but this lack of historical data was also deficient in informing the Arborist of any previous problems or hazard reduction work on a particular tree.

Investigations by the Consultant into several off-the-shelf Tree Management Software systems, discounted most of these as being too inflexible and not suitable for the result desired by the City of Darwin. The reasons for this was discussed in a Report presented to the City of Darwin.

The NEMUS Tree Management Software, however was considered to be the most suitable as it consisted of a basic program which could then be tailor made to the Council's specific requirements and therefore this program was selected by Council to be the most suitable to meet its' needs into the future.

A period of consultation between Asset Edge (Developer of NEMUS) the Urban Forest Management Team and the Consultant and a trial period then ensured that all of the requirements were identified prior to introducing the NEMUS program into everyday use.

The use of NEMUS by council Arborists and Contractors means that not only can existing trees be entered into an easily retrievable data base at their initial assessment but that all work carried performed on individual trees is now recorded, all new plantings are entered and there is then the ability to record the lifetime history of these trees.

The City of Darwin commenced using the NEMUS Tree Management System (NEMUS) as its tree management tool in August 2017.
Enter here procedures for NEMUS and CoD data base

1. The Benefits of Trees:

Trees are an essential part of the urban landscape, they are just as important as other infrastructure such as roads, footpaths and bus stops. They provide significant economic, social and ecological benefits and in many cases their care and maintenance may be considered more important than built infrastructure as they are not as easily replaced. You can build a footpath in days; a tree takes years.

A well-managed Urban Forest has significant benefits including;

a. Improved property values
b. Provide a pleasant softening effect on the built environment
c. Enhance architecture – buildings look better in the company of suitable trees
d. Decrease the heat island effect by shading roads and car parks, reducing bitumen temperatures by up to 13° Celsius thus reducing the costs of road maintenance
e. Create more desirable spaces for movement and recreation
f. Trap carbon and produce oxygen
g. Ameliorate extremes of noise, wind, sunlight, temperature and air pollution
h. Help to screen out traffic noise
i. Provide the opportunity to establish distinct neighborhood character
j. Provide habitat and food for wildlife
k. Form corridors for the movement and refuge of wildlife
l. Reduce the impacts of rainfall runoff and reduce erosion

2. Scope.

This Tree Management Plan (TMP) will effectively guide the City of Darwin and its' Urban Forest Management (UFM) team in all aspects of Tree Management into the future. As with all management plans it should remain a "live" document subject to reviews on a least a biennial occurrence, particularly with regard to technological advances in information technology.

The TMP will cover in sequential order, the following;

a) Scope and use of Nemus Tree Management System
b) Protocols for site and species selection
c) List of preferred Tree Species
d) Nursery Stock selection
e) Planting and establishment techniques
f) Tree pruning techniques
g) Quarterly Inspections and Assessments
h) Bi-annual Inspections and Assessments
i) Visual Tree risk Assessment including;
    - Level 1 Visual Tree Risk Inspection
    - Level 3 Visual Tree Risk Assessment
j) Protocols for tree removal
k) List of Significant and Heritage Trees
l) Heritage, Significant and Veteran Tree Management
m) Protection of Trees on Development Sites
n) Arborist Qualifications
o) Land Use planning
p) Co-ordination with other Service Providers

3. Nemus Tree Management System.

3.1 Scope.

The Nemus Tree Management System is a Web based system that has been developed in Australia by AssetEdge and designed specifically for Councils and other tree managers with large tree inventories.

The software is designed to record and manage all of the Council's Tree Data by utilizing both web and android interfaces to provide onsite data collection and analysis as well as office desktop planning and reporting.

This is achieved by collecting data on site by smart phone or tablet with simple "drop down" pick lists and key entry. All information including date, time, images, GPS coordinates and risk assessment is stored on the device then synchronized to a central server using the mobile phone network or wireless networks.

All inspection records, risk analysis and tree data can then be viewed, analyzed and managed from any desk top computer that has an internet connection. These data are also retrievable by Arborists in the field.

Each user has a secure login and password to ensure security of the data. Only personnel with Administrator access can make changes to the system. The benefits of using Nemus include:

- Secure website dedicated to City of Darwin with multi-level security
- User defined attributes for specific asset and inspection data collection
- On-site access and data retrieval
- Individual tree search by species, characteristics or location
- Automatic cross reference from common name to Genus, species etc.
- Cost effective
- Mapping tools
- Enables Council to record & store individual tree data from planting to senescence or removal

3.2 Use of Nemus

Nemus will be used by all Council Arborists and accredited Council contractors; the Risk Assessment system incorporated into Nemus is based on ISO 31000-2009, which is the overarching generic Risk Assessment Standard from the International Organization for Standardization (ISO)

The Risk Assessment System and the Risk Matrix referred to in this TMP was developed by Consulting Arborist, Bill Sullivan using ISO 31000-2009 as the baseline.

The Nemus Tree Management System and the Risk Assessment System referred to above are the only systems to be used when assessing risk and recording data on Council trees.

It will be many years into the future before all trees managed by the Council are recorded on Nemus, due to the large amount of trees on Council land. However, from the implementation of this TMP every tree planted by Council will be recorded, every tree inspected or assessed by a Council Arborist or contractor will be recorded on the system with any changes to the tree's characteristics recorded at each subsequent inspection. Each Risk Assessment and any hazard reduction work will also be recorded.

Over time this will give Council Officers a complete history of individual trees, of the suitability of different species in different situations. It will also greatly assist with future management planning including the possibility of a species specific disease outbreak whereby all trees of a similar species can be identified by location and appropriate measures can be actioned to prevent the spread of the disease.

4. Protocols for Site and Species Selection.

In any Forest, but particularly the Urban Forest, diversity is the key to long term sustainability of that forest. This diversity is relevant to the percentage of single family, genus and species planted and the percentage of similar age trees not only in the overall tree population but in individual suburbs.

The planning of new and replacement trees in Darwin must take a long term view given that the Useful Life Expectancy of a tree from planting to senescence could be in excess of 50 years.

4.1 Species Diversity.

Having a large representation of one particular family, genus or species leaves the Urban Forest vulnerable to both pest and disease outbreak that is family, genus or species specific. For this reason in particular, it is important to avoid planting suburban monocultures.

For example, the pathogen Myrtle Rust (*Puccinia psidii)* was discovered on Melville Island in 2015 and is believed to have spread to the mainland around Darwin. All of the family *Myrtaceae* including all *Eucalypts, Callistemon, Melaleuca, Leptospermum and Syziggium* are susceptible to this disease. *Fusarium* fungal disease has devastated the Weeping Rosewood population in the Top End.

Frequently quoted, although not scientifically based, the rule of thumb in the United States and in Australia's major cities suggest the Urban Forest should be made up of no more than;

- 30% of a Family
- 20% of a Genus
- 10% of a Species

Although nothing can be done regarding existing percentages, planning for the future should be taking into account the dangers of putting all of the eggs in one basket so to speak. However, species diversity may be constrained by the size and availability of planting sites particularly for large trees on streets.

Species diversity is also an important consideration for adding colour and contrast to the city. A mix of both native and exotic species will add colour as mostly they will flower during different seasons. Northern Territory natives do not, as a rule produce vibrantly coloured flowers, so adding exotic, flowering species adds colour diversity to the urban forest.

4.2 Age Diversity.

Good age diversity is essential to future population stability. Species that have proven adaptability to the Darwin environment and soil types should be stabilized by ensuring that the population of that species has a broad age range. In street trees, populations depend primarily on the longevity of individual trees and sufficient numbers of successfully planted replacements.

On an economic level, age diversity means that maintaining the Urban Forest becomes a more evenly paced process. For instance, mass tree removal caused by the impending senescence of a large number of trees is avoided thereby reducing strain on that year's budget.

Avoiding large numbers of removals in the one year also lessens the impact those removals will have on the overall appearance of the Urban Forest and also on the public's response to those removals.

4.3 Size.

Size and structure of trees in the Urban forest will be dictated by a number of things;

- Location
- Available space
- Soil types
- Park or street tree
- Purpose
- Proximity of either underground and overhead services
- Tree selection must be appropriate for the space available and the purpose required.
- The species selected should be the largest, longest living species available for a particular site.
- Upright growing species are preferable for sites with limited space whilst larger areas, roadways and wider streets should preference large spreading species to cast wider shade patterns.

A large, strategically located tree has a bigger impact on conserving energy and mitigating the urban heat island effect than a number of smaller trees, larger trees cast more shade for longer periods and therefore project a more salubrious outlook.

Larger trees do more to;

- Reduce storm water runoff
- Extend the life of street surfaces
- Improve local air, soil and water quality
- Reduce atmospheric carbon dioxide
- Provide wildlife habitat
- Increase property values
- Enhance the attractiveness of the local area
- The bigger the tree the larger the benefits

5. Planting sites

An optimal planting site allows space for uninhibited root development (in volume, surface area and shape of surface area) provides uncompacted soil, good solar access, provides sufficient space away from adjacent infrastructure and vehicular traffic and not limited by overhead service wires etc.

Selection of an appropriate planting site is a crucial factor in determining the long-term viability and cost effectiveness of a street tree. A poorly positioned tree has the potential to diminish the visual appeal of a streetscape, cause structural damage, become hazardous or require excessive spending on pruning and maintenance.

Darwin has a wide variety of soils including many rocky areas particularly along the foreshore cliff. Where planting is planned in these areas extra-large holes need to be provided to allow the structural roots to expand naturally otherwise root girdling will occur within the hole or roots will be either on the surface or shallow.

In normal planting situations a planting hole at least 3 times larger (in diameter) than the root ball and at least as deep as the root ball (if deeper it must be back filled) must be provided. This hole must not be drilled with a round auger as this will cause circling roots, restricting the trees ability to grow.

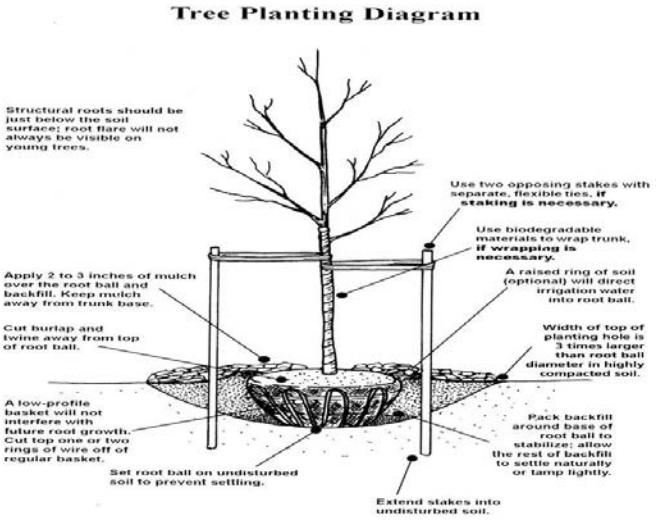
When planting on concrete footpaths, median strips, bitumen car parks and in paved areas such as the Darwin Mall, tree pits must be provided in order to facilitate good root development and tree growth. There are several tree pit products commercially available, such as the examples below.

Planting trees in the CBD streets, car parks or other concrete/bitumen area without Tree Pits of a minimum 20^2 metres is really a waste of time and money. Permanent irrigation in these areas is also essential.

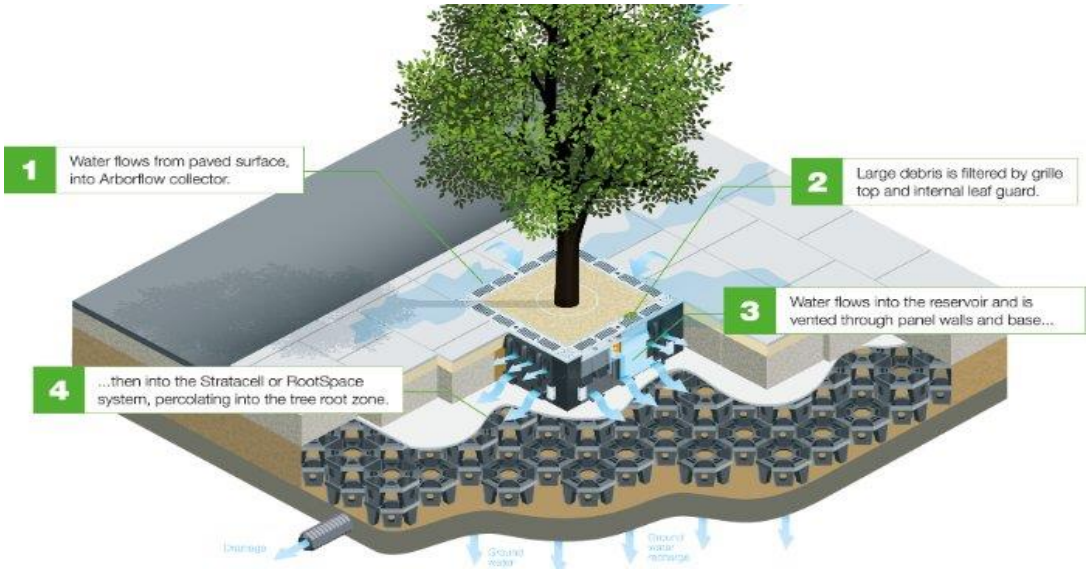
A quality tree install utilizing an appropriate sized tree pit and irrigation for a large shade tree that is anticipated to provide 80^2 of shade within 6 – 7 years will cost $5,000 - $10,000. A cost of $62.50 - $125.00 per square metre of shade. A similar sized awning would cost $800.00 - $1,200.00 per square metre. (Source: Clouston Associates)

Where underground services make planting difficult and expensive on footpaths consideration should be given to planting on roadways adjacent the footpath. Properly designed planting pits will easily carry the weight of parked vehicles so the loss of parking space is actually less than 1 sq. metre per tree.

5.1 An example of tree planting procedures.



Tree Pit Examples below.



5.2 Clearances from infrastructure to new tree planting.

Site Constraint	Nominal Clearance
Street intersection	10 metres from intersection of kerb line
Driveway	3 metres from edge of driveway
Street light pole	4 metres from centre of pole
Storm water inlet	2 metres from edge of inlet
Major underground service junction	3 metres from edge of junction box
Bus stops	18 metres on the approach & 3 metres on the departure
Traffic Lights	10 metres from the pole of traffic lights
Kerb & gutter	0.6 metres from the back of kerb

6. List of Preferred Tree Species.

It should be noted that the City of Darwin has many constraints on and requirements of its trees. No one tree can manage those constraints and meet all of the requirements. There is no one perfect urban tree.

Basic issues relating to urban tree selection are summarized below;

a. Biological requirements relate to the tree's ability to tolerate urban conditions including the ability to sustain vigorous growth in relation to the root space available with minimal management inputs.
b. Functional and spatial issues include the tree's ability to tolerate pruning to provide required clearances, and a root system that will not adversely impact on adjacent infrastructure but still support the tree.
c. Aesthetic issues include the tree's ability to enhance the visual or other amenity of the streetscape or park.
d. Tree longevity, the longer a tree is able to grow and thrive the greater the benefits and the greater return on the initial investment.

e. Litter drop of leaves, fruit, or flowers can have nuisance value; species that have excessive litter drop should be avoided on streets but may be acceptable in parks.
f. Certain native species produce flowers and fruit that attract bats and Torres Strait Pidgeons and are not suitable for urban planting.
g. Any species that is a Declared Weed is not to be considered.

Adaptability to urban conditions is paramount and some species have proved more adaptable than others. It is also important for Urban Forest planners to consider that whilst Darwin is now a relatively small city, a tree planted in 2017 is expected to still be around in 40 or 50 years when the city will look entirely different and allowances must be made for this.

There are 10 base criteria to be considered when selecting preferred tree species;

1. Drought tolerance – surviving the Dry Season without irrigation.
2. Heat tolerance.
3. Water logging tolerance.
4. Longevity
5. Pollution tolerance
6. Pathogen and insect tolerance (or resistance)
7. Does not produce allergens
8. Shade area
9. Low maintenance
10. Low litter drop.

A List of Preferred Tree Species is at Appendix ?????????

7. Nursery Stock Selection.

Good quality plant stock is imperative to ensure the optimal chance of survival, reduce establishment time, and reduce the potential for formation of growth defects as the tree develops.

To ensure the best chance of survival and good development tree planting stock must;

- Be true to type
- Have appropriate height and caliper
- Be healthy with adequate crown density, good cover & form, leaf colour & size, absence of epicormic shoots and no evidence of die-back
- Good crown symmetry
- Have appropriate stem taper
- Be self supporting
- Have good branching off a strong central leader
- Be formatively pruned with no signs of included bark
- Have healthy root-balls that show no signs of suckering or girdling
- Be propagated as per AS 2303-2015

Full details of the requirements for Nursery stock selection can be found in the Tree Selection for Streets, Parks and Verges at Appendix >??????? and in the separate booklet.

The City of Darwin may opt to either grow its' own planting stock or contract approved nurseries to supply or alternatively contract a particular nursery to propagate its' tree stock.

A Period Contract for 3 years would seem to be the most logical and cost effective process as this will allow the CoD to dictate the terms and conditions of supply and also ensure that the plant stock is produced to the specification required.

Historically, nurseries have dictated what species are available but by introducing a Period Contract with a list of required species and standards, the Council will be able to plan what trees it wishes to plant where and when.

The contracted nursery will be required to comply with Australian Standard 2303-2015, Tree Stock for Landscape Use.

8. Planting and establishment Protocols.

a. All tree planting stock must comply with the selection criteria outlined in Section 7.
b. The CoD may use contractors for the planting and establishment of new trees
c. Species selection must match the available space. Trees should not be planted if there is not sufficient root space to accommodate the mature tree
d. Trees should not be planted where there is insufficient soil or the soil is contaminated
e. Providing adequate root growth space is essential to growing healthy trees
f. All plantings will be recorded onto the NEMUS Tree Management System at time of planting.

9. Tree Pruning Techniques

Trees are living mechanical structures that have evolved to cope with the conditions under which they grow.

Intervention with the tree's self- management should be done only as a last resort as such intervention has ramifications for the tree's ability to regulate its own systems.

Urban trees grow under artificial or contrived conditions and therefore the tree's own self-regulatory system may often be compromised, requiring intervention.

The most common form of intervention is pruning. However, it must be noted that most pruning is done for "people reasons" not "tree reasons". The most common reason for pruning is to make the tree "safe" or to conform to the available space around other spaces such as buildings or to provide sufficient height clearance for pedestrian and vehicular traffic.

Whilst young growing trees will require formative pruning, mature trees should never be pruned unless it is necessary for the safety of people or infrastructure or to assist the tree in overcoming a pest or disease attack.

Over pruning of mature trees is a common practice by tree managers who think a tree should be regularly pruned. The terms "*thinning"* and "*weight reduction"* are still used by Council and contracted tree crews and often results in the removal of photosynthetic material for no good structural or biological reason with the result that many large mature trees in Darwin are over pruned, to the detriment of the tree.

The over pruning of trees can have both short and long term detrimental effects on the safety, health and ULE of the tree. Significant loss of foliage created by excessive pruning may weaken the tree by reducing its ability to adequately photosynthesize, leading to premature decline or predisposition to branch failure or disease, creating potential hazards.

An over pruned tree will have changed wind dynamics within the canopy and limbs will be increasingly subjected to increased strain that may result in limb failures.

Over-pruning also results in the reduction of canopy cover, thus reducing the effect trees have on cooling bitumen and concrete. As a consequence, the benefits of a tree in reducing road maintenance costs is reduced.

Correct pruning practices respect the natural form and branching habit of the tree and work with the tree's natural defense mechanisms against disease and to avoid damage and injury to the tree.

The extent of any pruning should take into account;

- the condition and significance of the tree
- any detrimental effect the pruning may have on the tree
- the location of the tree
- Any potential impact on pedestrians and vehicular traffic

All pruning of trees within the City of Darwin will be done to the highest standard of Arboricultural practice in accordance with Australian Standard 4373-2007 and will be undertaken to ensure the following;

- The general safety of people and infrastructure

- Safe access for pedestrians and vehicles
- Safe visibility for both pedestrians and vehicles
- Suitable clearance under overhead power lines
- Aesthetics and amenity value of the tree, street and surrounding area
- Retain, where possible, the canopy cover over roads, streets and car parks etc.
- Continuing healthy growth of the tree
- Repair any physical damage to the tree

Generally, pruning should be as minimal as possible to achieve the desired aim and should not remove any more the 10% of the foliage at any one time and all "*reduction"* pruning must be done from the distal end of limbs and branches back towards the trunk.

Correct "*Natural Target Pruning"* techniques as defined in AS 4373-2007 strictly prohibit the following practices;

- Lion tailing of scaffold limbs
- Lopping or topping of trunks or branches
- Excessive removal of foliage or "*cleaning out"* of the canopy
- Flush cutting

All pruning of trees within the City of Darwin must be undertaken by a person qualified to at least Level Three in Arboriculture from an Approved Training Provider.

Australian Standard AS 4373-2007 is Appendix ???????/

10. Visual Tree Risk Assessment including;

Level 1 – Limited Visual or Drive-by Inspection: A Drive-by or walk-by Inspection can be carried out by an Arborist and can be used in most situations as an initial assessment tool. A limited visual inspection is not a complete 360 degree assessment and is used to identify possible high risk targets & suspect trees which are then referred for Level 2 or Level 3 Assessment. A Drive-by Inspection can also be used to identify trees or groups of trees that do not require a risk assessment but require other work such as pruning, canopy uplift for traffic clearance etc. Drive-by inspections are also useful post cyclone or severe storms when a drive by can identify fallen trees, trees on houses, windblown tops etc. A Level 1 Inspection is not classed as a **VTRA** or a **VTA.** It is purely a method of identifying a tree that requires a Visual Tree Risk Assessment.

Level 1 Inspections may also be done by park horticultural staff who wish to refer a suspect tree to a Level 5 Arborist for a Level 3 Assessment.

Level 3 – Advanced Assessment: An advanced assessment which may involve an aerial inspection, will include all tree data including height, DBH, Crown spread, live crown ratio, crown class, structure, form, vigor, suitability to site, all defects, decay detection, disease, wind load assessment, root damage, targets, failure potential etc. and is usually reserved for higher risk areas where quarterly or bi-annual Tree Risk Assessments are Council policy or trees referred from a Level 1 Inspection.

10.1 Visual Tree Risk Assessment (VTRA) vs Visual Tree Assessment (VTA)

For the purposes of this Tree Management Plan it is important to recognize the differences between a Visual Tree Risk Assessment (VTRA) and a Visual Tree Assessment (VTA). A VTRA is only performed where there is an identified **Hazard Tree** and an identified **Risk Target** and is used for the sole purpose of assessing the degree of risk and recommending control measures to mitigate that risk.

A Visual Tree Assessment (VTA) is a comprehensive Visual Assessment of a tree for a variety of reasons including, determining the health of the tree, recommending treatment for pests or disease, suitability to the site, Significant Tree or Heritage listing, Tree protection or valuation etc. Essentially, a VTA is a Level 3 Assessment performed on a tree where the risk is already at ALARP status and no risk assessment is required.

10.2 Current Assessment Methods:

The City of Darwin currently carries out Quarterly Risk Assessments on what it has determined as high risk areas. These areas or locations include primary schools, high schools and Council owned Child Care Centres, high use parks and road reserves and the CoD intends to carry out bi-annual inspections on all leased properties in the future.

Other areas, including those leased to private business of not-for-profit organizations are inspected and assessed on a bi-annual basis.

Other Risk Assessments are carried out based on customer requests and/or reports from horticultural staff or as the need arises.

10.3 Defining Acceptable levels of Risk

Any tree that may impact on a target presents some degree of risk. The nature and quantity of the target will define the level of risk.

Where there are high value targets, ie. schools, CBD, high voltage power lines, hospitals etc the level of risk should be ALARP, (As Low As Reasonably Possible) but a medium level of risk may be acceptable elsewhere, for example, in a park where there is no play equipment and little activity.

High levels of risk should not be tolerated in any situation.

Therefore, any tree within a quarterly inspection zone or a bi-annual inspection zone must be at the ALARP level either during the inspection or as soon after as possible.

10.4 Quarterly Assessments

The City of Darwin will continue its quarterly inspections as per the quarterly inspection list but adopt a different approach with three Level 1 inspections and one Level 3 Inspections as follows.

Quarter 1 Inspection: January and prior to school returning after holidays on 29 January. This is a Level 1 inspection and where necessary a full Level 3 Inspection of individual trees as may be recommended by the Inspector performing the Level 1 inspection.

Quarter 2 Inspection: April and Level 3 Inspection of individual trees as may be recommended as a result of the Level 1 inspection. This is the *"end of the wet"* inspection and considered the most critical as trees start to dry out and the prevailing south east winds commence.

Quarter 3 Inspection: July and only a Level 1 – Drive-by inspection with a Level 3 Inspection of individual trees as ascertained by the drive-by observations.

Quarter 4 Inspection: October, and only a Level 1 – Drive-by inspections with a Level 3 Inspection of individual trees as ascertained by the drive-by observations.

Note: A Level 1 Inspection is as much about eliminating 'safe' trees from a detailed risk assessment as it is about identifying trees which require a more rigorous assessment. A level 1 inspection is more cost effective without compromising the integrity of the assessment process.

Instructions to Assessors must be clear that, if during a Level 1 inspection a tree is thought to be in a hazardous condition within a target zone, then a higher level of assessment must be done. If the Assessor is not appropriately qualified (Level 5 Arborist or above) for a higher level of inspection then his/her report must recommend that the tree immediately assessed by the appropriately qualified Arborist.

During the wet season some areas, parks etc. will be inaccessible to vehicles. In this case a walk-by Level 1 assessment will be done.

Level 1 Inspection will also be performed by Parks staff during their normal work routine. In the way suspected hazard trees will be identified and referred to an Arborist for a higher level of assessment.

Level 1 Inspections should also be carried out in selected locations following community reports of damaged trees, severe storms, cyclones, or traffic accidents involving trees.

10.5 Upgrading Assessments.

With the introduction of the Nemus Tree Management System the City of Darwin has the ability to acquire, store and retrieve data in an efficient way, then by using those data it will be able to compare the historical data collected and review the sites listed for Quarterly Inspections with the intent that where a certain site has remained at ALARP level over three Level 1 Inspections and one Level 3 Inspection then the periodic inspection time can be extended to a bi-annual inspection.

Similarly, bi-annual inspections and assessments on Leased Properties can, after an appropriate number of ALARP assessment results some properties can by placed on an annual inspection/assessment regime.

The following Risk Management Procedures are also produced as a separate Procedures Manual for use by City of Darwin Arborists and Contractors.

11. Tree Risk Management Procedures.

a. ISO 31000 – 2009 Risk Management

ISO 31000-2009 is the International Standard for Risk Management. It has superseded AS/NZS 4360-2004. The following is a brief description of the relevant sections of that Standard as it appertains to this Manual.

b. Risk Management Policy:

A policy statement defines a general commitment, direction, or intention. A *Risk Management Policy* statement expresses an organization's commitment to risk management and clarifies its general direction or intention.

c. Risk Management Plan:

An organization's *Risk Management Plan* describes how it intends to manage risk. It describes the management components, the approach and the resources that will be used to manage risk.
Typical management components include procedures, practices, responsibilities and activities, including their sequence and timing.

d. Risk Identification:

Risk Identification is a process that involves finding, recognizing and describing the risks that could affect the achievement of an organization's objective.

e. Risk Assessment:

Risk Assessment is a process that is in turn, made up of three processes: *risk identification, risk analysis and risk evaluation.*

- *Risk Identification* is a process that is used to find, recognize and describe the risks that could affect the achievement of objectives. It also includes the identification of possible causes and potential consequences. You can use historical data, theoretical analysis, informed opinion and expert advice to identify risk.
- *Risk Analysis* is a process that is used to understand the nature, sources and causes of the risks you have identified and to estimate the level of risk. It is also used to study impacts and consequences and to examine any controls that already exist.
- *Risk Evaluation* is a process that is used to compare risk analysis results with risk criteria in order to determine whether or not a specified level of risk is acceptable or tolerable.

f. Risk Treatment:

Risk Treatment is a risk modification process. It involves selecting and implementing one or more treatment options. Once a treatment has been implemented it becomes a control or it modifies existing controls. There are many treatment options;

- Avoid the risk
- Reduce the risk
- Remove the source of the risk
- Modify the consequences (remove/reduce the target)
- Retain the risk as acceptable (As Low As Reasonably Possible)

g. Controls:

A Control is any measure or action that modifies risk. Controls include any new policy, procedure, process, practice technique, method or device that modifies or manages risk. Risk Treatments become controls, or modify existing controls one they have been implemented.

h. Residual Risk:

Residual Risk is the risk left over after the implementation of a risk treatment option. It is the risk remaining after the reduction of the risk, removal of the risk, changed the probabilities, modification of the consequences, transferring the risk or retaining the risk

i. Review:

A Review is an activity which is carried out in order to determine whether something is a suitable, adequate and effective way of achieving established objectives. In general ISO 31000 expects an organization to regularly review its risk management framework and risk management process. It specifically expects an organization to review its risk management policy and risk management plans as well as its risk criteria and risk assessment process.

12. Introduction to Visual Tree Risk Assessment.

Risk management is a well-established concept in the management of public space but identifying and managing risk associated with trees is still a subjective process although the scientific understanding of trees and how they grow and fail has increased dramatically in recent times. Experienced and suitably qualified Arborists are now adopting a systematic and documented approach to rating hazardous trees and assessing the risk associated with those trees.

All trees have a risk of failure and every tree will eventually fail. As trees increase in size, mass and maturity, the risk of failure increases. Trees with serious defects are unpredictable and can fail at any time. Evolved traits play a significant role in defect profiles. Unpredictable branch sheds are an example as trees which evolved in dense forests learned to shed their branches.

The Visual Tree Risk Assessment also details the health of the subject trees. The current health of a tree and it's susceptibility to fungal and/or insect attack is also a factor in ascertaining any future risk that may be posed by the tree.

Tree Risk Assessment requires three components;

- a tree with the potential to fail
- an environment that may contribute to that failure
- Persons or objects that would be injured or damaged (i.e. the Risk Target).

By definition a dangerous situation requires the presence of both a defective tree and a target.

Danger is defined as "*exposure to harm*"; Risk is defined as the "*statistical odds of danger*"; If a tree is assessed as dangerous it is the degree of risk that increases or decreases, depending on the potential number of Risk Targets.

As a result, risk assessment is not limited to evaluating the failure potential of a tree. Risk Assessment must consider the potential presence of a Risk Target. If there is no Risk Target, there is no risk and therefore a dangerous situation cannot exist.

Visual Tree Risk Assessments are fundamentally based on a simply methodology;

1. is there a hazard/defect and how or when is it likely to fail
2. is there a Risk Target and how long is it in the impact zone
3. how much damage will it cause

There are at least 23 different Tree Risk Assessment Methods identified by Martin Norris in a study of this subject in 2007. 15 were chosen for further study and a wide range of variables were found when results were analyzed.

Most Methods rely on mathematical calculations to arrive at a result with huge differences in the assessments of the same trees using different methods.

The method below is based on ISO 31000-2009 with a simple matrix used to arrive at a Risk Rating. This method relies on the Assessor's training, knowledge and experience to assess the tree and the Risk Target. The Matrix will merely ensure the consistency of the terminology used so that the Assessment Report can be understood by third parties who may have little or no arboricultural knowledge.

13. Risk Assessment Terminology.

a. Risk:

Risk is simply the chance of a specific undesired event occurring within a specified period. Risk = Likelihood x Consequences (Standards Australia 2004) or as it relates to **Visual Tree Risk Assessment; Failure Potential x Risk Target Rating = Risk Assessment.**
The assessment period is critical as it allows an evaluation of likelihood to be undertaken. All tree risk assessments must be defined by a timeframe. (Norris 2007).

b. Hazard:

Australian Standards define "Hazard" as a *source of potential harm,* this definition is derived from an International Standard (ISO 3534:1993). A tree related hazard will generally be aligned to the defect or defects identified during the assessment.

c. Risk Target:

It has been suggested in some tree risk literature (Lonsdale 1999) that the term "target" is not appropriate as it suggests something that is aimed for.
Therefore the term "Risk Target" overcomes this issue and should be used to describe people or property that may be affected by the hazard (Norris 2007)
Risk Target will be used in this Assessment Guide to describe anything or anyone who may be affected by a hazard.

d. Defect:

A defect is an identifiable fault in a tree, whether structural or otherwise. Defects and causes or symptoms are not the same; a hollow in a tree is a defect but termite infestation is the cause of the defect, not the defect. Decay is a defect, a fungal fruiting body is a symptom of the decay, not a defect.

Trees may have multiple defects ranging from minor dead wood to co-dominant trunks with included bark. Small dead wood is more likely to fail than a large co-dominant trunk but the co-dominant trunk would most likely pose the higher risk.

e. Size of Part:

The size of the part most likely to fail can be considered by the assessor when assessing the likely damage or consequence as should be the height above ground of the part. However, the size of the part will only have a limited relationship to the potential consequences depending on the Risk Target, eg: compare the consequences of the same part impacting a person, a house, a car or a footpath.

f. Failure Potential or Likelihood of Failure:

This is the term used to describe the possibility that a defective part may fail within the Risk Assessment period. This is not a difficult concept, however it is the most uncertain part of the assessment and it is impossible to do more than give an expert opinion or assessment. An Assessor may be certain that a defective part will fail, however predicting when is impossible and will depend on a wide variation of circumstances. Also it may never happen.

g. Risk Target Rating :

The possibility that something of value may occupy the Risk Target Zone at the time of failure.
A building under the defective part has a Risk Target Rating of 100%, or High Constant Use, whereas a person spending 5 seconds walking under the tree once a day occupies the Risk Target Zone for 1/17,280 of a day, 50 people passing under the tree is a likelihood of 1/345, therefore the likelihood of harm is much higher.

This category is often misunderstood with Assessors assigning the Risk Target Rating based on the assumed value of the target. Example: A playground in a park may be assigned a high value despite the fact that it may

only be used by less than a dozen children for one hour on Sunday morning and therefore should have a relatively low Risk Target Rating.

h. Risk Rating:

The Risk Rating score is determined after assessing the Failure Potential and the Risk Target Rating of an identified hazard tree. The Risk Matrix is used to determine the level of risk.
Failure Potential x Risk Target Rating = Risk Assessment.
The determination of these calculations will indicate the priority and course of action when recommending the control measures to be undertaken.

The risk Rating will range from **As Low as reasonably possible (ALARP) to High 3 (failure imminent, high Risk Target Rating)**

i. Acceptable Risk:

Acceptable risk is a point where the overall risk is considered to be at a level where no intervention or action is warranted. (Norris 2007). However, in Australia, particularly in tree risk assessment no such point is set.

From the Assessor's point of view, acceptable risk is not within their purview as this must be set by the tree's owner or responsible body, in this case the City of Darwin.

No tree is "safe"; no one can define a tree as "safe" or "unsafe" without some qualification of acceptable risk. Therefore the Assessor, when describing a tree with a very low risk factor with no control measures required, will use the term ALARP (As Low As Reasonably Possible) to describe the risk.

14. Qualifications of Assessors:

In keeping with the Australian Qualifications Framework, the recommendations of the NT Coroner, (para 92, page 30 of the Coroner's Report into the death of William Brown), nationally recognized Arborist's associations and the City of Darwin policy, all Assessments must be performed by Qualified Arborists holding at least a Diploma in Horticulture (Arboriculture) from a recognized Training Provider.

15. Risk Assessment Methods:

The City of Darwin has adopted 3 distinct methods of Tree Risk Assessment;

Level 1 – Limited Visual or Drive-by/Walk-by Inspection: A Drive-by Inspection can be carried out by an Arborist and can be used in most situations as an initial assessment tool. A limited visual inspection is not a complete 360 degree assessment and is used to identify possible high risk targets & suspect trees which are then referred for Level 2 or Level 3 Assessment. A Drive-by Inspection can also be used to identify trees or groups of trees that do not require a risk assessment but require other work such as pruning, canopy uplift for traffic clearance etc. Drive-by inspections are also useful post cyclone or severe storms when a drive by can identify fallen trees, trees on houses, windblown tops etc. A Level 1 Inspection is not classed as a **VTRA** or a **VTA.** It is purely a method of identifying a tree that requires a Visual Tree Risk Assessment.

Level 1 Inspections may also be done by park horticultural staff who wish to refer a suspect tree to a Level 5 Arborist for a Level 3 Assessment.

Level 3 – Advanced Assessment: An advanced assessment which may involve an aerial inspection, will include all tree data including height, DBH, Crown spread, live crown ratio, crown class, structure, form, vigor, suitability to site, all defects, decay detection, disease, wind load assessment, root damage, targets, failure potential etc. and is usually reserved for higher risk areas where quarterly or bi-annual Tree Risk Assessments are Council policy or trees referred from a Level 1 Inspection.

16. Visual Tree Risk Assessment (VTRA) v Visual Tree Assessment (VTA)

For the purposes of this Manual it is important to recognize the differences between a Visual Tree Risk Assessment (VTRA) and a Visual Tree Assessment (VTA). A VTRA is only performed where there is an identified **Hazard Tree** and an identified **Risk Target** and is used for the sole purpose of assessing the degree of risk and recommending control measures to mitigate that risk.

A Visual Tree Assessment (VTA) is a comprehensive Visual Assessment of a tree for a variety of reasons including, determining the health of the tree, recommending treatment for pests or disease, suitability to the site, Significant Tree or Heritage listing, Tree protection or valuation etc. Essentially, a VTA is a Level 3 Assessment performed on a tree where the risk is already at ALARP status and no risk assessment is required.

17. Risk Assessment Procedures.

Note:

A Level 1 or drive-by inspection is also potentially useful after severe weather events to initially pin point downed or damaged trees in order to prioritize cleanup work. These inspections are to be treated as "one off" and do not replace scheduled Quarterly Inspections.

Insert here the risk assessment procedures from the Tree Risk Assessment Manual after Nemus setup is completed

18. Protocols for Pruning &Tree Removal

Trees under the management of the City of Darwin will only be removed in accordance with the Council Policy on Tree Removal.

INSERT RELEVANT POLICY & PROCEDURES HERE WAITING ON COUNCIL TO FINALIZE ITS POLICY.

19. Key Performance Indicators.

It is essential that, for any activity to be successful that it be measurable against a number of operational criteria or Key Performance Indicators (KPIs).

The Chart below is an example of how Key Performance Indicators are recorded, their use as management tool to record the accuracy or otherwise of estimated hours against actual hours, a historical record of human resources used, WHS requirements and outcomes.

Data is simply entered at the end of each day into a pre-existing table on a Tablet and emailed to the UFM at the end of each month. Totals age automatically generated.

19.1 Example of KPI chart.

SITE	Date	JOB or PO NUMBER	PERSONNEL ON SITE FOR THIS DAY						RISK MANAGEMENT				INCIDENTS		JOB COMPLETED		Estimated Hours	Actual Hours
			Level 5	Level 4	Level 3	Labourers	Traffic Controllers	TOTAL	Traffic Plan	JSA	SWMS	Toolbox	Serious	Non-Serious	Yes	No		
Freshwater Road	12/05/17	123	1	0	1	4	2	8	1	1	1	1	0	0	Yes		6	6
Gardens Road	15/05/17	124	0	0	1	2	2	5	1	1	1	1	0	0	Yes		8	7
Darwin Mall	20/05/17	125	1	0	1	4	2	8	1	1	1	1	0	0	Yes		5	7
Anula Walkway	28/05/17	126	1	0	1	4	0	6	0	1	1	1	0	0		No	12	8
Anula Walkway	29/05/17	126	1	0	1	4	0	6	0	0	0	1	0	1	Yes	Yes	0	4
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TOTALS FOR MONTH			4	0	5	18	6	33	3	4	4	5	0	1			31	32

20. List of Significant and Heritage Trees.

20.1 Listed Heritage Trees.

The listing of Heritage places and things in the Northern Territory under the Heritage Act is the responsibility of the Heritage Council NT which is under the auspices of the Department of Land, Planning and the Environment.

There are seven Heritage Listed trees in Darwin.

1. The Tree of Knowledge (Ficus *virens* or Banyan) located at the City of Darwin Chambers in Harry Chan Avenue
2. 3 x Milkwood Trees (Alstonia *actinophylla)* in Smith Street
3. Boab Tree (Adansonia *Gregorii)* in the Cavanagh Street car park
4. Banyan Tree (Ficus *virens)* State Square
5. Milkwood Tree (Alstonia *actinophylla)* in Foelsche Street

Any arboricultural work performed on these trees must have prior approval from the Heritage Council and be performed by a Level 5 Arborist.

Other Declared Heritage Places within the CoD jurisdiction include:

- Palmerston Cemetery (Pioneers Cemetery) Parap
- Gardens Road Cemetery
- Frog Hollow

The trees growing on these sites form part of the Heritage Place and therefore are subject to the same rules as the listed trees.

21. Heritage, Significant and Veteran Tree Management

22. Protection of Trees on Development Sites

TO BE INSERTED

23. Arborist Qualifications

The City of Darwin will pursue a policy of employing Qualified Arborists up to Diploma Level (AQF Level 5) or above for all Supervisors and Tree Assessors. Contract Arborists and tree maintenance companies will be expected to adhere to this policy as well. AQF Qualifications or equivalent from recognized overseas institutions are the only qualifications recognized by the City of Darwin. “Qualifications” issued by ISA, QTRA and similar organizations are not recognized as legitimate qualifications in Australia.

The Australian Qualifications Framework (AQF) is the national policy for regulated qualifications in Australian education and training. It incorporates the qualifications from each education and training sector into a single comprehensive national qualifications framework.

All tree crews will have, as a minimum, a Level 111 Arborist as the Leading Hand. All tree crews including ground crew should receive sufficient training to ensure safety, efficiency and correct Arboricultural practices are used at all times. Chain Saw and Wood Chipper training is essential for all crew.

The relevant AQF Levels are summarized below:

	AQF Level 3	AQF Level 4	AQF Level 5
Summary	Graduates will have theoretical and practical knowledge & skills for work	Graduates will have theoretical & practical knowledge & skills for specialized and/or skilled work	Graduates will have specialized knowledge & skills for skilled and/or paraprofessional work.
Knowledge	Graduates will have factual, technical & some theoretical knowledge of specific areas of work	Graduates will have broad factual, technical & some theoretical knowledge of specific areas or a broad field of work	Graduates will have broad factual, technical & some theoretical knowledge of specific areas or a broad field of work
Skills	Graduates will have a range of cognitive, technical & communication skills to select and apply a specialized range of methods, tools & information to complete routine activities & provide and transmit solutions to problems	Graduates will have a range of cognitive, technical & communication skills to select and apply a specialized range of methods, tools & information to complete routine & non routine activities & provide and transmit solutions to both predictable & unpredictable problems	Graduates will have a range of cognitive, technical & communication skills to select and apply a specialized range of methods, tools & information to complete routine & non-routine activities & provide and transmit solutions to both predictable & unpredictable problems. Transmit knowledge and skills to others.
Application	Graduates will apply knowledge & skills to demonstrate autonomy & judgement & take limited responsibility within known parameters.	Graduates will apply knowledge & skills to demonstrate autonomy & judgement & take limited responsibility within known parameters.	Graduates will apply knowledge & skills to demonstrate autonomy & judgement & defined responsibility in known or changing contexts & within broad but established parameters.

24. Land Use planning

25. Co-ordination with other Service Providers

ESTABLISHING A RESILIENT URBAN FOREST FOR DARWIN

Best Practice Guidelines

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Reference No: 3777063
Version: 29 October 2018_Rev C

Cyclone Marcus 2018

Executive Summary

Cyclone Marcus went over Darwin on 17th March 2018. For a category 2 cyclone with wind gusts up to 130 km/hour, the damage seemed disproportionately high. The visual impact of the number of very large trees uprooted and subsequent power interruptions and infrastructure damage will remain with many residents as the indelible memory of Cyclone Marcus. A review was required to understand why so many trees failed.

The review firstly established that regardless of the best efforts and following of best practice, the community must acquire an acceptance of, and an expectation that some tree failures and losses will occur during storm events. Tree risk management options are presented in the 'Whole of Life Tree Management' section. This is an area recommended for further community consultation and education.

This report presents an assessment of 219 tree species against several attributes that contribute to cyclone resilience. Appendix A is the preferred tree list for Darwin with 194 species. Whilst a heavy weighting has been placed on observed cyclone resilience, in selecting tree species for a location it is not solely about cyclone resilience. A tree species with low or medium cyclone resilience may have a particular attribute, such as form, colour, wildlife attractant etc. that is desirable in that landscape design for a location. Some low cyclone resilience species are small and unlikely to cause damage in the event of uprooting. Appendix A therefore includes a mix of species with high, medium and low cyclone resilience. The use of any of these species needs to be tempered by an understanding of their performance in storm events and the conditions of the planting site.

Appendix B contains 25 species not recommended for planting in Darwin. This includes many with a low cyclone resilience. In addition, there are species that are highly cyclone resilient but are not recommended for planting in particular locations for other reasons such as being allergenic/poisonous, are invasive, or have nuisance fruit.

Tree Selection

Darwin Urban Forest

To achieve the outcome of a stable tree that has a high resilience to cyclonic events requires attention to the entire life cycle of the tree. This starts with the selection of the most appropriate species through to the whole of life management of the mature tree. This report discusses the best practice options at each of the stages of plant selection, plant procurement and supply, tree installation, and whole of life tree management and provides many technical suggestions and recommendations to improve tree stability in storm events.

To facilitate future selection of tree species a matrix template of factors to be considered for any species has been developed as an aid to decision-making. These fields are presented in Appendix C and the matrix is available in the form of an Excel spreadsheet.

Some tree species appear to be more susceptible to failure in storms and others appear to have some inherent characteristics that make them more resistant, however, the majority of tree failures during storms across the Greater Darwin region can be attributed to lack of maintenance such as pruning, or root disturbance caused by cutting or damage. The report discusses tree protection and maintenance regimes. These are identified as the critical and predominant factors in improving tree stability with the clear message that a priority should be given to adopting mechanisms that avoids such damage to trees.

While the report has a focus on individual tree species there is also a discussion around the concept of developing an urban forest and the recognition of the numerous benefits that not only individual trees bring but also when trees form an urban forest. A range of trees of varying ages and attributes will collectively have a greater cyclone resilience. Such diversity is an important aspect of a resilient urban forest.

Recommendations

A summary of the key recommendations is presented grouped under the headings found within the report.

Plant Selection

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.

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.

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.

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 liveable cool suburb is.

Tree Lists

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.

Plant Procurement and Plant Supply

6. *THAT* City of Darwin prefer tree supply be 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.

Pre-order and lead times

7. *THAT* City of Darwin continue with the contract for the supply of container grown trees.

Tree Installation

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.

Irrigation, water harvesting

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.

10. *THAT* City of Darwin stipulate in civil design projects that stormwater harvesting using storm water collection inlets should be installed wherever possible, and mandatory within the CBD.

Tree data base and data collection

11. *THAT* City of Darwin use 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.

12. *THAT* City of Darwin program reassessment of every tree every 3 years.

13. *THAT* City of Darwin provide appropriate Council officers and arborists with adequate resources for emergency operational data gathering to react promptly following an event.

14. *THAT* City of Darwin regularly review this report and the associated tree lists every 3 years or after a significant storm event.

Ongoing maintenance and associated funding – trees are a valuable community asset

15. *THAT* City of Darwin adopt the City of Melbourne tree valuation methodology.

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.

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.

18. *THAT* City of Darwin reviews its resources to maintain the urban forest to a satisfactory level.

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.

20. *THAT* City of Darwin prepare a citywide, long-term Strategic Urban Forest Management Plan.

Pruning

21. *THAT* City of Darwin adopt *AS4373-2007 Pruning of Amenity Trees* as the standard for maintaining trees.

Monitoring/ risk management/ acceptable risk thresholds

22. *THAT* City of Darwin adopts an industry standard, peer reviewed, tree risk assessment system.

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.

Tree protection

24. *THAT* City of Darwin adopt AS4970-2009 Protection of Trees on Development Sites as the standard.

25. *THAT* City of Darwin adopt mechanisms to enforce tree protection.

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.

Education

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.

Jingili Water Gardens Urban Forest

Lake Alexander Urban Forest

Introduction

The development of an urban forest for Darwin that has improved cyclone resilience requires an explicit recognition of the numerous contributions that trees make to a city and the community. These benefits are discussed in the section on *'Why Plant Trees?'*. The Darwin community needs to recognise that there will always be risks associated with trees and storm events but a city without trees would be an unthinkable outcome. The community needs to understand the balance between an acceptable level of risk and type of landscape that is envisaged for Darwin. Tree risk management options are presented in the Whole of Life Tree Management section. This is an area recommended for further community consultation and education.

To achieve the outcome of a stable tree that has a high resilience to cyclonic events requires attention to the entire life cycle of the tree. This starts with the selection of the most appropriate species and includes the processes of procurement, propagation, tree installation and then the whole of life management of the mature tree. A tree can be compromised at any one or more of these stages resulting in an inherently less stable tree. This report discusses the best practice options at each of these stages. This in turn will also maximise the value of trees as essential urban infrastructure and a community asset.

Presented in this report is a list of 219 tree species that have been assessed primarily for their cyclone resilience (Appendices A and B).Cyclone resilience is not the only factor that should influence the selection of trees within Darwin. There is no one perfect tree for Darwin. A range of trees of varying ages and attributes are needed to create diverse plantings that, collectively, have a greater cyclone resilience. Such a diverse tree collection is an important aspect of a resilient urban forest. There are species that are highly cyclone resilient but are not recommended for planting in particular locations for other reasons such as being allergenic/poisonous, invasive, or having nuisance fruit. These species are included in Appendix B.

Yanyula Park

Conversely, a tree with low cyclone resilience may have an attribute such as form, colour or wildlife attractant that is desirable in a location. Where these trees are small, such as many Grevilleas and Acacias, and unlikely to cause damage in the event of uprooting, they have been included in Appendix A. The use of these species needs to be tempered by an understanding of their performance in storm events. Choosing the right trees for a site is also about factors such as proximity to infrastructure, space constraints, soil type and depth, watering regime and purpose of tree.

To facilitate future selection of tree species a matrix template of factors to be considered for a species has been developed as an aid to decision-making. These fields are presented in Appendix C and the matrix is available in the form of an excel spreadsheet. The fields relating to cyclone resilience, geographic origin, invasiveness and height x spread have been completed. It is recommended that this task should be completed for the remaining fields. Appendix C also presents a further list of attributes that should be considered in an expanded matrix tool.

Cyclone Marcus 2018

Trees and cyclone resilience

"Species have been reported to show differences in resistance to Tropical Cyclone force winds. But wind resistant species only buys you so much protection. I think the more important factors are:

1) soil and site conditions, and

2) tree defects in the crown and root system;

I think these outweigh the importance of species, perhaps by a lot. Lists of wind tolerant trees vary because factors 1 and 2 above over-ride species so often.

So let's dispel the myth that we can solve wind related tree failure by selecting the right species alone

…… There is much to this and simply recommending species does a great disservice to our community."1

1. *https:hort.ifas.ufl.edu/woody/wind.shtml*

Shallow Roots

Resilient Forest

While cyclones pose an enduring threat to Darwin, this does not mean yards and public spaces should be without large trees. All large trees in Darwin are sufficiently mature to have survived at least one cyclone, and many trees have endured through many severe cyclonic and storm events. The wind speed, direction, duration, and the level of soil saturation are all are involved with tree failure under high wind loads.

Many tree failures during storms can be attributed to lack of formative pruning and associated tree defects, such as bark inclusions on co-dominant stems, as well as wounds resulting in decay columns causing mechanical weakness. Soil saturation from heavy rain events leads to soil failure causing root plate destabilisation. Other factors include root disturbance, cutting or damage with associated fungal infections prior to a storm which contribute to root plate failure. By avoiding such damage to trees, cyclone resilience will clearly be improved.

Room for tree roots to anchor, through appropriate tree pit design and tree planting techniques, coupled with the selection of quality trees for planting will have a significant impact in reducing tree failure during storm events. Careless maintenance causes fungal infections of root systems which in turn lead to mechanical weaknesses. These issues can generally be rectified by appropriate design and thoughtful maintenance. Tree installations, with a focus on the most suitable tree for the location, combined with sensible and sustainable design and appropriate arboricultural maintenance will improve urban forest resilience against severe tropical storms and cyclones.

The community must acquire an acceptance of, and an expectation that some tree failures and losses will occur during storm events. It is impossible to have trees around people without any risk at all. In severe storm events, some trees will fall over, some will break apart, others will damage fences, cars, and buildings and other infrastructure. Many will also stand and continue to provide shade and environmental functions long after the storm has passed.

Physiological, sociological, economic and aesthetic benefits.

A resilient urban forest

The concept of an Urban Forest is utilised in the City of Darwin (CoD) CBD Master Plan (2015) and is a concept supported in this report. The following is a quote from the Darwin CBD Masterplan.

> *"The Urban Forest comprises the trees and vegetation throughout the Darwin City Centre, inclusive of all tree types and irrespective of whether they are on streets, in parks or on private land.*
>
> *The Urban Forest, measured as a canopy cover percentage of the total land area, is recognised as a primary component of the urban ecosystem (LGA NSW 2003). It is one component of the complex-built environment along with roads, car parks, buildings, footpaths and services. Urban forests in and around urban communities provide physiological, sociological, economic and aesthetic benefits.*
>
> *They are one of the most effective means of cooling a city and have been shown to greatly reduce urban heat island effects. Streetscapes and public realm open space will play a key role in the Urban Forest.*
>
> *It is important that adequate provision in terms of space (above ground and underground) is made for trees.*
>
> *In addition to the initial capital costs of installing trees, there should be realistic ongoing funding for tree maintenance and management to ensure the potential benefits are fully realised.*
>
> *The development of individual sites by the private sector has an impact on the potential benefits of the urban forest through tree planting, green roofs, increased reflection of heat."2*

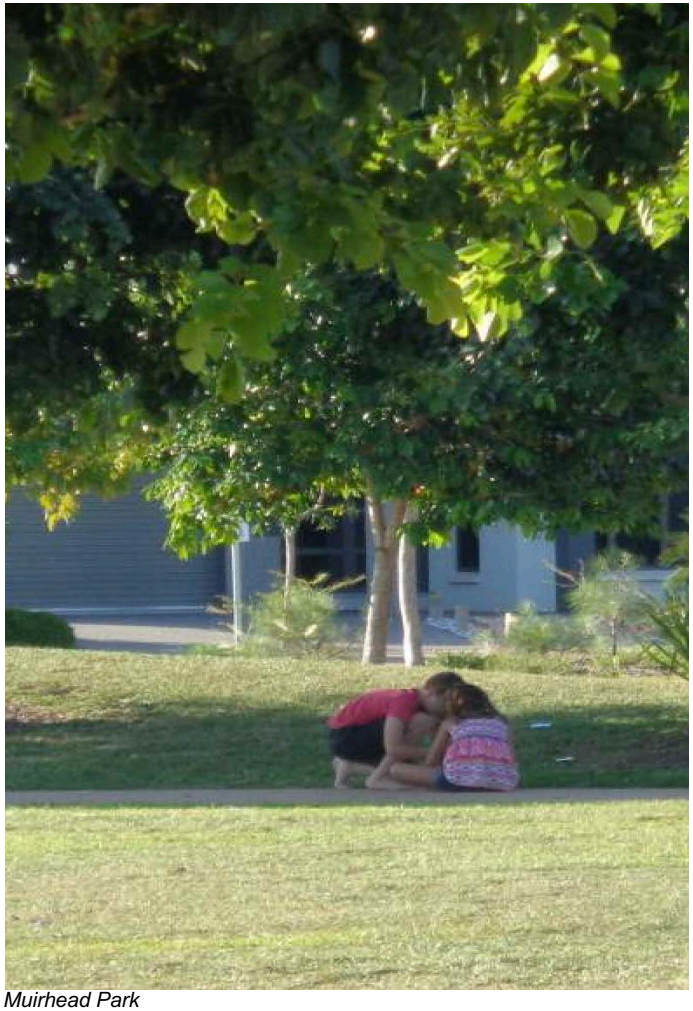
2 City of Darwin CBD Masterplan 2015

Change

Adoption of an Urban Forest concept brings with it a fundamental change to the approach in the way trees are viewed and managed. The following table summarises these changes to the approach to urban trees in Darwin:

Where we have been… Traditional Urban Tree Management	Where we need to be… Modern Urban Forestry Model
Trees as ornaments	Trees viewed as critical infrastructure
Focus on individual trees	Focus on overall canopy cover and forest
Trees treated with low priority	Trees have equal priority to other urban infrastructure such as roads and services
Trees have no monetary or economic value	Economic value of forest recognised and valued
Focus on smaller and ornamental species	Focus on larger longer-lived canopy trees
Individual tree maintenance	Overall forest management
Aesthetic based design only	Ecological and aesthetic based design
Legal boundaries determine tree management	Urban forest seen as continuous resource regardless of ownership boundaries

Table: Traditional versus modern urban forest approach (Source: North Sydney Council 2011)



Muirhead Park

WHY PLANT TREES?

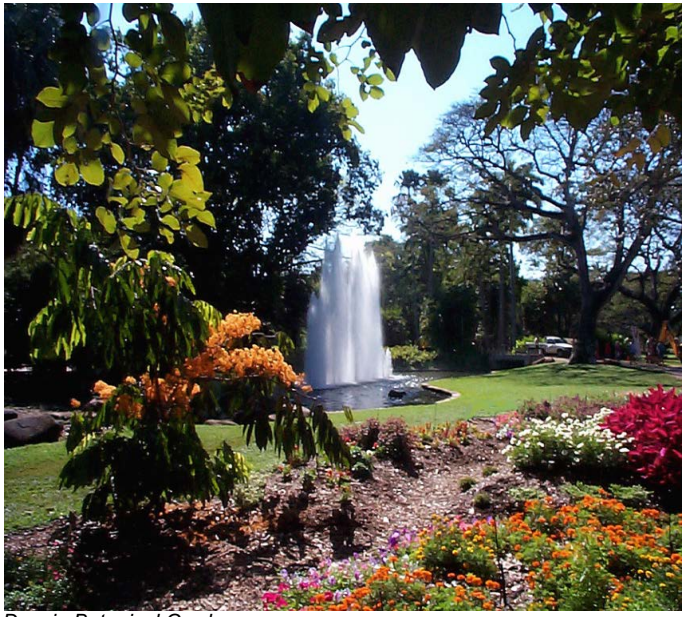
> *"It is a sign of a great civilisation when old men and women plant trees that they may never sit under to enjoy the shade"*
> Greek Saying

It is true, that planting a tree is an investment in the future. It is also true that trees have much greater value than just providing a shady spot to sit and socialise. In our developing cities, trees provide multiple benefits and recent studies indicate that their value to society can be significant. Preliminary research for the Darwin CBD trees undertaken in 2016 valued the trees at $2.4M.

In cities around Australia and the world, trees are increasingly being recognised as important Green Infrastructure, and the development of Urban Forests within our cities is becoming mainstream policy.

In our tropical city, trees are a key aspect of reducing temperatures. Dense shady tree canopies can reduce surface temperatures by up to 25 degrees and assist in reducing the overall ambient temperature. Studies have shown that this cooling effect can reduce air-conditioning costs for adjoining properties by thousands of dollars per year.

Trees are an important part of our culture, identity and character. Within Darwin, the Tree of Knowledge, the large Boab in the Post Office Carpark and numerous other Milkwoods, Banyans and Beauty Leafs are distinct and highly valued by the community. They have been meeting places providing shade and amenity for many years. They have also survived at least 4 cyclones - in 1917, 1937, 1974 (Tracy) and more recently 2018 (Marcus). Numerous surveys and public consultation undertaken by NTG and City of Darwin testify to the public's support for 'a lush, shady, tropical' city. There is widespread appreciation of tree lined shady streets and parks.

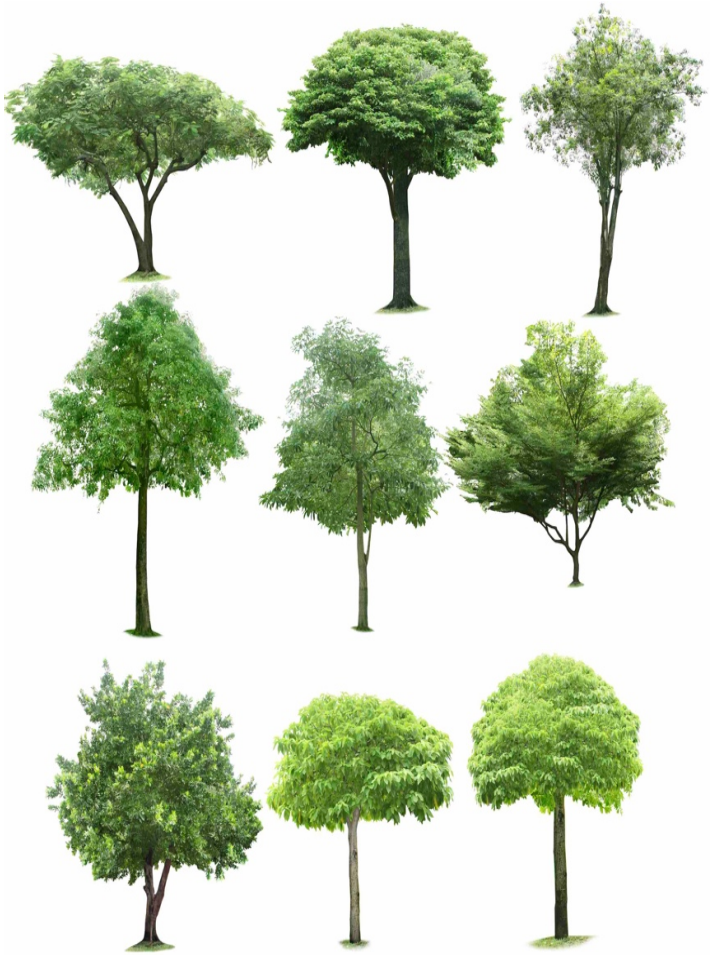


Darwin Botanical Gardens

Numerous studies within Australia and internationally demonstrate that well treed streets and suburbs are also those with higher property values. They are an investment with good returns for both private property owners and the community.

Trees provide valuable environmental benefits. Models developed and used in Australia demonstrate that the annual environmental contribution of a large, evergreen tree can be in the order of $10,000 and higher. This is in the areas of storing carbon (counteracting carbon emissions), removal of air pollutants and particles, water retention and cleansing. Trees can also contribute to infrastructure savings by reducing flooding levels and extending the life of road pavements.

Open space, parks and trees all make important contributions to the health and well-being of residents and visitors. Shady streets and parks promote physical and social activities. This translates directly to improved physical and mental health and has been shown to result in significant reductions in health costs.



Characteristics of trees

PLANT SELECTION

Plant selection is the first and most important step in the process of establishing a healthy, resilient tree. The golden rule should always be “The right tree for the right place”.

Consider the Strategic Aspects of an Urban Forest

- Life cycle (e.g. succession planting) considerations.
- Climate change considerations.
- Species diversity as part of a resilient urban forest. Many councils have a diversity plan along the lines of no more than 30% of one family, 20% of one genus and 10% of one species. This will help stagger growth rates of trees, avoid repeating past mistakes, (too many of one species of a similar age around the entire area) assist with allowing for climate change predictions and provide a more diverse selection of options.
- Maintenance and tree establishment commitment – resources and costs.

Consider the Physical Site Characteristics

Trees take time to develop and mature – they are living systems and their environment will greatly impact on how well they establish, mature and survive. Consider:

- Existing soils, natural drainage and water movements.
- Irrigation – permanent, temporary, establishment only or none.
- Shading and exposure arising from other trees, buildings and structures.
- Fast growth or long-term stability – these are often at odds.
- Available space – both above ground and below ground – refer to ‘Tree Installation’ section.
- Constraints such as underground and overhead services and the associated authority guidelines.

Raintree Park

Nature Playgrounds

Consider the Functional Requirements of Trees

- Shade to buildings, streets parks and open space.
- Creation of comfortable microclimates within outdoor spaces.
- Opportunities to educate (science studies, animal and plant interaction such as caterpillars, basis for art lessons, caring for land and Indigenous studies) and demonstrate sustainable land management practices.
- Indigenous local plantings provide habitat for native fauna and increase biodiversity values in the local area.
- Planting in the playground can inspire exploration, social interaction, learning and controlled risk taking for children.
- General; amenity and appearance.

From the above it can be seen that there are many aspects to be considered in plant selection. The Appendices to this report provide guidance on tree selection in respect of cyclone resilience, weed risk and other limiting factors, but this should only be the starting point in refining the final tree selection.

Appendices A and B are primarily a review of the list tree species that are known to be planted in and around Darwin. As such it is a limitation of the report. Further work should be done in relation to the evaluation of the myriad of individual planting sites along with the evaluation of many potentially suitable species that are not currently represented in the Darwin region. Included here would be also those species in the 'Inconclusive' category of cyclone resilience in Appendix A.

These species represent possible options to increase the diversity of species available for planting and may also represent species with favourable attributes under future climate scenarios. This is a field for ongoing trials, research and risk assessment that could be supported by City of Darwin and undertaken collaboratively with various stakeholders in Darwin.

Tree Canopy Adds to Walkable Neighbourhoods

The consideration of tree selection in future climate change scenarios is of increasing importance. Will tree species planted today cope with the temperature, rainfall and storm events predicted under future climatic conditions predicted for Darwin? Kendal *et al.* (2017) provide data on the risk of temperature rises due to climate change on trees in the Darwin CBD. Alarmingly, all of the 41 tree species assessed were flagged as at risk with temperature rises under a 'business as usual' scenario by 2070. Climate change resilience has been included in the tree selection matrix in Appendix C. However, it must be noted there is a paucity of data available for tropical trees. Most of the species in Appendices A and B are City of Darwin as 'Unknown' for climate change resilience. This is an area in need of further research that could be carried out in Darwin.

There is also the aspect of educating and responding to community aspirations for tree selection. The 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 liveable cool suburb is.

City of Darwin Nursery

Nursery Stock

PLANT PROCUREMENT AND SUPPLY

It is recommended that preference for supply be given to Nursery Industry Accreditation Scheme of Australia accredited nurseries. The accreditation provides an audited best practice system for production nurseries that ensures high quality plant stock.

Pre-order and lead times

The lead time and pre-ordering of stock is critical to ensure availability of quality stock at time of planting. As an example, 25 litre plants typically take 12-18 months to grow, larger plants require even longer lead times. Even tube stock/starter plants can require 12 months lead time due to constraints of seeding times, seed availability and species selection.

Issues around delays in construction projects provides many examples where plant stock has been held by nurseries for extended times which has led to the supply of stock that has been compromised by extended holding time. End users need to know tree stock has a use-by date and contracts for supply need to state these dates and put financial liability for unused, no longer suitable, ordered stock on the end user. Specifications around *AS 2303-2015 Tree Stock for Landscape Use*, in particular relating to container type, growing media and pruning/form need to be clear and adhered to by suppliers and enforced by end users. High tree quality according to *AS 2303-2015 Tree Stock for Landscape Use* should be the expectation of all end users. It is noted that a lack of alternative quality stock regularly forces end users to use poor quality stock.

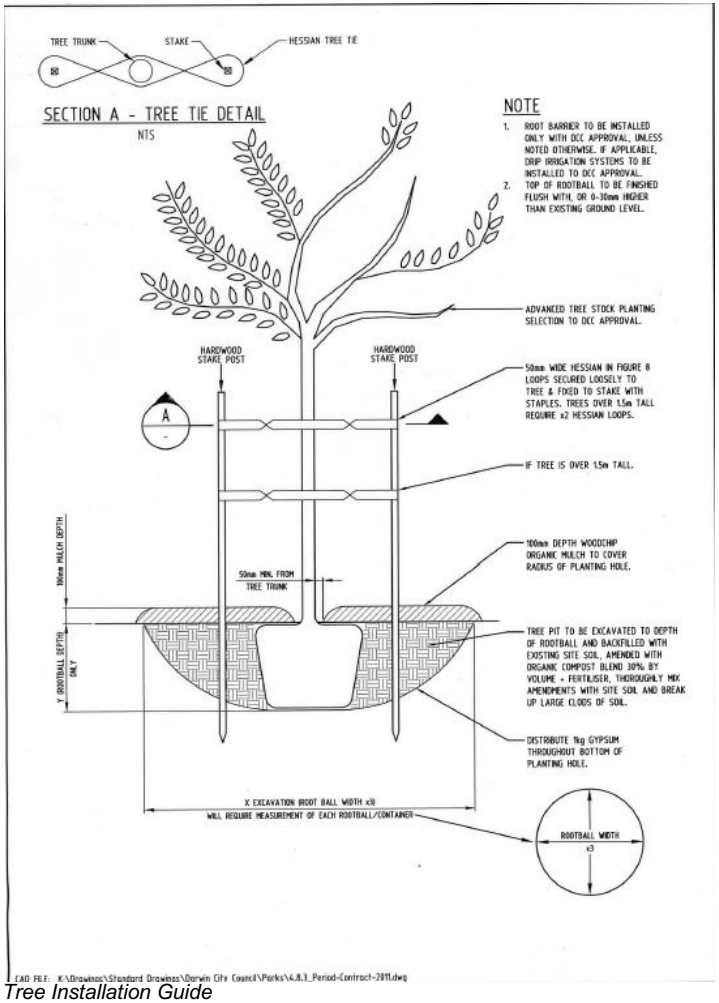
There is a need for limited quantities of high-quality stock of a pre-determined species list to be available at other times. The City of Darwin should continue with the contract for the supply of container grown trees.

Planting

Planting sizes (initial impact v long term viability)

Current research shows that smaller propagation container size produces a better outcome over larger containers. Research has also supported that air root pruning, regardless of propagation container size will produce superior quality stock.

Smaller plants are more prone to theft, vandalism, lawn mower/whipper snipper damage though it was noted that DIPL are getting good results with tube stock if in association with appropriate plant protection. City of Darwin has found that 25-50 litre propagation container size has been the most successful planting size.



Tree Installation Guide

TREE INSTALLATION

Tree planting specification – Turf/Garden areas

Tree planting in turf/Garden areas should be in accordance with the standard drawing below. Tree planting holes should be three times the diameter of the tree root ball and of the same depth. Root barrier or other impediments to lateral root growth must not be used at any time. Planting holes shall be excavated to ensure the sides of the hole are not glazed, compacted or otherwise hardened, as this has the effect of guiding the tree roots around the edge of the planting hole, causing circled and girdling roots which will have a negative effect on the trees long term resilience to high wind events.

Tree pit considerations – Size, volume, soil types, soil microbiome, drainage in urban landscapes

Ensure the maximum soil volumes possible but with minimum soil volumes specified. Industry publications and scientific findings in relation to both canopy diameters and recommended minimum soil volumes for tree rooting capacity can assist to provide specification to tree pit size and soil volume requirements for urban trees. Details are provided in Appendix E.

The Australian Standard *AS 4419-2003 Soils for Landscaping and Garden Use* should be followed with the use of “Sandy Loam” in the tree pit. The incorporation of humates and beneficial microbes prior to planting has been shown to be beneficial and can reduce the need for further fertilising.

Tree pits should be connected to stormwater or natural drainage. Woodchip mulch is preferable to paving and tree grates are preferable to permeable paving within 1500mm of tree trunks. The maximum area possible of permeable surface treatment over the structural root zone is preferred to facilitate water ingress and gas exchange.

In Ground Irrigation

Irrigation, water harvesting

In-ground irrigation is preferred over manual irrigation. Water truck irrigation is available. Drip irrigation can supply the recommended volumes. Whichever irrigation method is used 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.
Trees in hardscapes require watering each dry season.

The City of Darwin shall undertake a continuous 6-month watering program over the first 3 years following installation of any tree to irrigate installed trees. The works program schedule should be provided by the City of Darwin to staff and contractors engaged in watering trees. Due to varying climatic conditions, alteration of the start/finish time of the watering program and any additional watering may be advised.

Trees are to be watered via water truck or by drip line irrigation during the first three years following planting, with the following frequency:

- Three (3) times per week for the first Four (4) weeks only, after the planting date.
- Three (3) times per week for the duration of the first dry season (May 1st – October 31st)
- Two (2) times per week for the duration of the second dry season (May 1st – October 31st)
- Once (1) times per week for the duration of the third dry season (May 1st – October 31st)

At each watering event in the first-year irrigation supplied should match the volume of the container the tree was in prior to planting, for example:
25 litre tree = 25 litres per water
50 litre tree = 50 litres per water

In years 2 and 3, water volume should be a minimum of 30 litres per tree, per water event. The tree watering program should be carried out utilising qualified horticulturalists and used as an opportunity to identify issues such as pruning and pest and disease outbreak.

Trees and Services

Stormwater harvesting using storm water collection inlets should be installed wherever possible, and mandatory within the CBD. Water sensitive urban design options that relate to Darwin rainfall patterns can be considered to create a water bank, reduce runoff and optimise tree performance. Where tree pits utilise stormwater harvesting, they should also be connected to the stormwater system to ensure positive drainage is retained in tree pits to prevent waterlogging.

Working around services

It is acknowledged that trees are essential in the CBD despite potential conflict with services. A design review involving all stakeholders would facilitate infrastructure and tree coexistence. Such a review would be particularly relevant to nature strip situations and should maximise and optimise uninterrupted soil volumes and crown space for tree establishment.

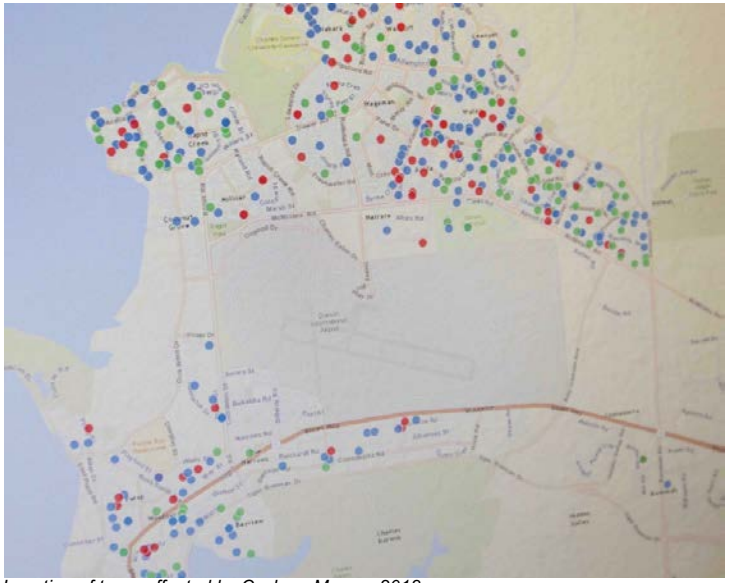
Conflict with services could be reduced by:

- Locating CBD trees in the road pavements where space in verges is restricted due to underground services or other constraints.
- Referring to the relevant service authority requirements for clearances.
- Consolidating services on one side of the street. In many suburban streets overhead lines are down one side of the road, water and sewer down the other making conflict with trees inevitable.
- Mapping high priority power/water infrastructure and ensure plantings will not interfere with main delivery lines under any circumstances.
- Defining an acceptable level of risk to infrastructure.
- Using a tree valuation method to realistically compare values with infrastructure costs.

Maintaining the Urban Forest

Establishment (Year 3) including fertilising program and formative pruning

- A fertiliser program for new plantings should be developed that provides 2 applications annually of a suitable fertiliser and 2 applications during the dry season of an appropriate soil wetting agent.
- Where possible, it is preferable to provide fertiliser and wetting agents by means of liquid application, via a water truck. Granular products may be used where necessary.
- Each tree should be mulched as per the planting specification at least once annually or as required using high quality, aged woodchip mulch with a maximum of 10% fine particles (10mm in diameter)
- Formative pruning shall be undertaken annually, and pruning must be in accordance with *AS 4373-2007 – Pruning of amenity trees*.
- Pests and diseases will be treated as required to ensure trees remain healthy and establish to their full potential.



Location of trees affected by Cyclone Marcus 2018

WHOLE OF LIFE TREE MANAGEMENT

Tree data base and data collection

The use of a data base to systematically inventory park and street tree assets is recommended and it is noted that City of Darwin has made progress in this aspect. There needs to be a systematic approach to ensure all Council areas are covered. It is recommended that 100% of trees in the municipality be identified and plotted over a 3 year period. There should be a programmed reassessment of every tree every 3 years. The management of the tree inventory data requires dedicated software that provides the required functionality and that can interface with other IT platforms used by City of Darwin. The committee notes that *Treeplotter* software is one option that meets City of Darwin requirements.

Such an approach will assist City of Darwin with their tree management plans. Knowing what you have, and its location is a prerequisite to manage assets in a cost effective and proactive manner. TC Marcus has provided a unique opportunity for City of Darwin to conduct an inventory as there are now many thousands less trees. The inventory data is a foundation to build operational plans and will assist City of Darwin with future planning and planting plans.

Council should also use the report on TC Marcus and its data format as a basis for gathering data following future storm/cyclone events. An additional data field that should be included in future reports is to record observations on why an individual tree has failed e.g. root damage, poor pruning, disease etc. Several Council officers and arborists should be trained and allocated for emergency operational data gathering with adequate resources to react promptly following an event. Accumulating information in such a way and conducting regular reviews of this report and the associated tree lists every 3 years or after a significant storm event will continue to improve the cyclone resilience of tree plantings in Darwin.

Increasing Canopy Cover

The tree inventory, data base and resultant improved planning will facilitate a shift from reactive tree management to a proactive modern urban forest model which will result in fewer customer requests, better tree health and structure and more cost-effective operations.

Ongoing maintenance and associated funding – trees are a valuable community asset

If mature trees are properly valued, then the decision making for works in proximity to trees becomes a straight forward cost benefit analysis. The cost of activities such as realigning irrigation trenches or design and placement of footpaths can then be compared with the properly assessed value of a mature tree which may be in the tens of thousands of dollars. Added to that value can be the assessment of damage to infrastructure should the works compromise the tree stability in a future storm event.

There are tools for valuing trees in an urban setting and a good example that is relatively simple to use is the system developed by the City of Melbourne.
https://www.melbourne.vic.gov.au/SiteCollectionDocuments/Tree-valuations.DOC

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.

City of Darwin should 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.

Tree Management

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. A citywide, long-term Strategic Urban Forest Management Plan is required.

Following the endorsement of this report and any recommendations that are accepted by council the *Tree Management Plan* should be reviewed to ensure that the *Tree Management Plan* accurately reflects the findings of this report and any recommendations endorsed by council.

Irrigation/ supplementary watering

Watering regimes for the first 3 years are discussed under the Tree Establishment section. After 3 years most, trees should be sufficiently established to survive without additional watering. There may be locations where additional watering is needed but this should be assessed on a case by case basis.

City of Darwin in conjunction with other stake holders should investigate the use and installation of storm water collection inlets for storm water harvesting and watering of street trees.

Pruning

For long term management of trees *AS4373 Pruning of Amenity Trees* is recommended.

Monitoring/ risk management/ acceptable risk thresholds

The community needs to understand and have an expectation and acceptance of tree failure(s) during cyclonic and major storm events; it is inevitable.

Tree Management

Therefore, a tree risk threshold needs to be defined and understood by the community and this may require some effort in community education. What level of tree risk is acceptable and what level is not, and what level of risk requires intervention. In the development of risk thresholds there must be a consideration of cyclonic strength wind events. This should be balanced by the demonstrable benefits that trees provide during cyclonic events. A tree risk inspection program that identifies and consequently mitigates tree risk to avoid or reduce exposure to legal liability claims is integral to such a risk management strategy.

It is recommended City of Darwin adopts an industry standard, peer reviewed, tree risk assessment system. The International Society of Arboriculture Tree Risk Assessment Qualification (TRAQ) method (Dunster 2017) and the Quantified Tree Risk Assessment system (QTRA 2018) are two methods worth considering. A tree risk assessment system would be used to develop risk thresholds and points where intervention is required and lead to a balanced and proportionate tree risk management approach.

Tree protection

The management and care of the below ground portion of a tree is as important as the management of the above ground portion. If tree roots are not protected, then it is irrelevant what species are planted. Damage to large portions of any tree root system will compromise the tree and contribute significantly to instability and uprooting in a storm event.

There is an Australian Standard - *AS4970-2009 on Protection of Trees on Development Sites*. This should be followed but more importantly Council should consider mechanisms to enforce tree protection. One effective means to protect public trees could be achieved by integrating the requirements *of AS4970-2009 Protection of Trees on Development Sites* into council development processes.

Tree Management

AS4970-2009 should be incorporated into City of Darwin council's works permit system. Works within 3 meters of any tree less than 5 meters in height, or within the Tree protection zone of any tree greater than 5 meters in height must have a works permit issued, with conditions in place to ensure the protection of the tree as per the standard in place. City of Darwin should encourage all other NT government departments to follow suit.

The committee recommends that Council should review existing measures in other LGA's 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. The establishment of a bond on tree assets for protection has been used by City of Darwin during construction of the Raintree Park upgrade. The implementation and success of this should be reviewed by Council as a possible option for all construction activities in proximity of trees on Council land.

Education

It is recommended 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. This would include educating all stake holders on the importance of the recommendations in this document and the repercussions if these guidelines are not adhered to.

Gardens Road

Conclusion

Darwin needs its urban forest as the effects of climate change, the need to attract and retain population and tourism continue to grow. Adoption by City of Darwin of the full cycle of tree management recommended in this report, assists City of Darwin to retain and increase its urban forest well into the future, even in the event of cyclones such as Marcus 2018.

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AS 4419-2003 Soils for landscaping and garden use. https://www.standards.org.au/standards-catalogue/sa-snz/consumer/cs-037/as--4419-2003

AS 4970-2009 Protection of trees on development sites. https://www.standards.org.au/standards-catalogue/sa-snz/agriculture/ev-018/as--4970-2009

APPENDICES

APPENDIX A

PREFERRED TREES FOR DARWIN

A tree with low cyclone resilience may have an attribute such as form, colour, wildlife attractant that is desirable in a specific location. Where these trees are small, such as many Grevilleas and Acacias, and unlikely to cause damage in the event of uprooting, they have been included in Appendix A.

Similarly, trees that have been recognised as having a medium cyclone resilience because of issues with branch drop or trunk splitting are included here. The use of these species needs to be tempered by an understanding of their performance in storm events and careful consideration of the planting location.

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Acacia	dunnii	Elephant Ear Wattle	NT Native	Low
Acacia	torulosa		NT Native	Low
Acacia	latescens		NT Native	Medium
Adansonia	gregorii	Boab	NT Native	High
Adansonia	digitata	African Boab	Exotic	Medium
Adenanthera	pavonina	Red Bead Tree	NT Native	Medium
Aidia	racemosa	Archer Cherry	NT Native	High
Albizia	lebbeck	White Siris	NT Native	Medium
Albizia	saman	Rain Tree	Exotic	Medium
Allosyncarpia	ternata	Allosyncarpia	NT Native	Medium
Alphitonia	excelsa	Red Ash	NT Native	Medium
Alstonia	actinophylla	Northern Milkwood	NT Native	High
Antidesma	ghaesembilla		NT Native	High
Araucaria	cunninghamii subsp. cunninghamii	Hoop pine	Australian Native	Medium
Archontophoenix	alexandrea	Alexandra Palm	Australian Native	High

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Arfeuillea	arborescens	Hop Tree	Exotic	High
Asteromyrtus	magnifica		NT Native	High
Asteromyrtus	symphyocarpa	Liniment Tree	NT Native	High
Banksia	dentata		NT Native	High
Barringtonia	asiatica	Poison tree	Exotic	High
Barringtonia	acutangula	Freshwater Mangrove	NT Native	Medium
Bauhinia	variegata	Purple Bauhinia	Exotic	Low
Berrya	cordifolia	Trincomalee	Exotic	Inconclusive
Bismarkia	nobilis	Bismark Palm	Exotic	Medium
Bombax	ceiba	Kapok Tree	NT Native	High
Brachychiton	diversifolius	Kurrajong	NT Native	High
Brachychiton	rupestris		Australian Native	Inconclusive
Brownea	spp.		Exotic	Medium
Browneopsis	ucayalina		Exotic	High
Buchanania	arborescens	Little Gooseberry Tree	NT Native	High
Buchanania	obovata	Green Plum	NT Native	High
Caesalpinia	ferrea	Leopard Tree	Exotic	Medium
Callistemon	viminalis	Weeping Bottlebrush	Australian Native	High
Callitris	intratropica	Northern Cypress Pine	NT Native	High
Calophyllum	inophyllum	Beauty Leaf	NT Native	High
Calophyllum	sil		NT Native	High
Canarium	australianum	Melville Island White Beech	NT Native	High
Carallia	brachiata	Bush Current	NT Native	High
Cassia	nodosa	Rainbow Shower	Exotic	High
Castanospermum	australe	Black Bean	Australian Native	High
Casuarina	equisetifolia	Coastal She-Oak	NT Native	Medium
Casuarina	papuana		Exotic	Medium

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Casuarina	cunninghamiana	Riverine Casuarina	NT Native	Inconclusive
Celtis	philippensis		NT Native	High
Citharexylum	spinosum	Fiddlewood	Exotic	Medium
Citrus	latifolia	Lime	Exotic	High
Clerodendrum	floribundum	Clerodendrum	NT Native	Medium
Coelospermum	reticulatum		NT Native	Low
Cordia	subcordata	Kerosene Wood	NT Native	Medium
Corymbia	ptychocarpa	Swamp Bloodwood	Australian Native	Medium
Corymbia	polycarpa	Long-Fruited Bloodwood	Australian Native	Medium
Corymbia	bleeseri	Smooth stemmed bloodwood	NT Native	Medium
Corymbia	jacobsiana	String Barked Bloodwood	NT Native	Medium
Corymbia	arnhemensis	Katherine Gorge Bloodwood	NT Native	Medium
Corymbia	papuana	Ghost Gum	Australian Native	Medium
Corymbia	polysciada	Apple Gum	NT Native	Medium
Corymbia	bella	Ghost Gum/White Gum	NT Native	Medium
Cupaniopsis	anacardioides	Tuckeroo	NT Native	High
Cyclophyllum	schultzii	Canthium	NT Native	High
Denhamia	obscura	Denhamia	NT Native	High
Dillenia	alata	Red Beech	NT Native	Medium
Dillenia	indica	Elephant Apple	Australian Native	Medium
Diospyros	compacta	Australian Ebony	NT Native	High
Diospyros	maritima	Broad Leaved Ebony	NT Native	High
Diospyros	nigra	Black Sapote	Exotic	Medium
Dodonea	platyptera	Hop Bush	NT Native	Low
Dypsis	lutescens	Golden Cane	Exotic	High
Dypsis	madagascariensis	Malagasy Palm	Exotic	High

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Elaeis	guineensis	African Oil Palm	Exotic	High
Erythrina	variegata	Coral tree	NT Native	Medium
Erythrophleum	chlorostachys	Ironwood	NT Native	High
Eucalyptus	apodophylla	White bark	NT Native	High
Eucalyptus	alba	White Gum/Salmon Gum	NT Native	Medium
Eucalyptus	herbertiana	Herbert's Gum	NT Native	High
Eucalyptus	nesophila	Melville Island Bloodwood	NT Native	High
Eucalyptus	bigalerita	Northern Salmon Gum	NT Native	Medium
Eucalyptus	miniata	Darwin Woollybutt	NT Native	Medium
Eucalyptus	oligantha	Broad-leaved Box	NT Native	Medium
Eucalyptus	phoenicea	Scarlet Gum	NT Native	Medium
Eucalyptus	tectifica	Darwin box	NT Native	Medium
Eucalyptus	tetrodonta	Northern Stringybark	NT Native	Medium
Eucalyptus	tintinnans	Hills Salmon Gum	NT Native	Medium
Fagraea	racemosa	Fagraea	NT Native	Inconclusive
Ficus	scobina	Sandpaper Fig	NT Native	High
Ficus	virens	Banyan	NT Native	High
Ficus	coronulata	Peach-Leaf Fig	NT Native	High
Ficus	opposita	Sandpaper Fig	NT Native	High
Ficus	racemosa	Cluster Fig	NT Native	High
Ficus	rubignosa	Port Jackson Fig	Australian Native	Medium
Ficus	longifolia	Narrow Leaf Fig	Exotic	Medium
Ficus	brachypoda	Rock fig	NT Native	Inconclusive
Ganophyllum	falcatum	Scaly Ash	NT Native	Medium
Gardenia	megasperma		NT Native	High
Gardenia	fucata		NT Native	Medium
Grevillea	angulata	Holly Leaf Grevillea	NT Native	High

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Grevillea	heliosperma	Rock Grevillea	NT Native	High
Grevillea	parallela	Silver Oak	NT Native	Low
Grevillea	pteridifolia	Fern-Leaved Grevillea	NT Native	Low
Grevillea	refracta	Silver-Leaf Grevillea	NT Native	Medium
Grevillea	decurrens	Clothes-peg Tree	NT Native	Medium
Helicia	australasica	Helicia	NT Native	Inconclusive
Hibicus	tiliaceous	Beach Hibiscus	NT Native	Medium
Hibicus	tiliaceous var. rubra	Red Beach Hibiscus	NT Native	Medium
Horsefieldia	australiana	Nut Horsfieldia	NT Native	High
Hydriastele	wendlandiana	Florence Falls Palm	NT Native	High
Hyophorbe	verschaffeltii	Spindle palm	Exotic	High
Jacksonia	dilatata	Jacksonia	NT Native	High
Kigelia	pinnata	Sausage Tree	Exotic	High
Lagerstroemia	indica	Crepe Myrtle	Exotic	High
Lagerstroemia	speciosa	Pride Of India	Exotic	Medium
Latania	loddigesii	Blue Latan Palm	Exotic	High
Leptospermum	madidum	Weeping Tea Tree	NT Native	High
Licuala	ramsayii	Queensland Fan palm	Australian Native	High
Livistona	benthamii	Benthams Fan Palm	NT Native	High
Livistona	humilis	Sand Palm	NT Native	High
Livistona	inermis	Whispy Fan Palm	NT Native	High
Livistona	mariae subsp. rigida	Mataranka Fan Palm	NT Native	High
Livistona	muelleri	Northern Cabbage Palm	Australian Native	High
Lophostemon	grandiflorus subsp. riparius	Northern Swamp Box	NT Native	High
Lophostemon	lactifluus	Swamp box	NT Native	High
Lyrata	pandurata	Fiddleleaf fig	Exotic	Inconclusive
Mangifera	indica	Mango	Exotic	Medium

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Maniltoa	lenticellata	Silk handkerchief tree	Australian Native	High
Maranthes	corymbosa	White Cloud Tree	NT Native	High
Melaleuca	leucadendra	Weeping Paperbark	NT Native	High
Melaleuca	argentea	Silver-Leaved Paperbark	NT Native	High
Melaleuca	bracteata	Black tea tree	NT Native	High
Melaleuca	cajuputi	Paperbark	NT Native	High
Melaleuca	dealbata	Paperbark	NT Native	High
Melaleuca	minutifolia	Paperbark	NT Native	High
Melaleuca	nervosa	Fibrebark	NT Native	High
Melicope	elleryana	Euodia	NT Native	Low
Micromelum	minutum		NT Native	High
Miliusa	brahei	Miliusa	NT Native	High
Millettia	pinnata	Indian Beech	NT Native	Medium
Mimusops	elengi (cultivated)	Mimusops Red Condoo	Exotic	High
Mimusops	elengi (NT natve)	Mimusops	NT Native	High
Mimusops	elengi cv. Street Elegance	Mimusops "Street elegance"	Exotic	High
Monoon	australe	Northern Territory Polyalthia	NT Native	Medium
Morinda	citrifolia	Rotten Cheesefruit	NT Native	High
Myoporum	acuminatum	Boobialla	Australian Native	Inconclusive
Myristica	insipida	Wild Nutmeg	NT Native	High
Nauclea	orientalis	Leichardt Tree	NT Native	High
Peltophorum	pterocarpum	Yellow Flame Tree	NT Native	Medium
Persoonia	falcata	Milky plum	NT Native	High
Petalostigma	pubescens	Quinine Tree	NT Native	High
Phaleria	clerodendrum	Butterfly Tree/Scented Daphne	Australian Native	High

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Pittosporum	moluccanum		NT Native	Medium
Pittosporum	angustifolium	Native Apricot	NT Native	Inconclusive
Planchonia	careya	Cocky Apple	NT Native	High
Pleiogynium	timoriense	Burdekin plum	Australian Native	High
Plumeria	obtusa	Singapore Frangipani	Exotic	High
Plumeria	rubra	Frangipani	Exotic	High
Polyalthia	longifolia	Polyalthia	Exotic	Medium
Polyalthia	longifolia subsp. pendula	Indian Mast Tree	Exotic	Medium
Pterocarpus	indicus	PNG Rosewood	Exotic	Medium
Ptychosperma	macarthurii	Macarthur palm	NT Native	High
Roystonea	regia	Cuban Royal Palm	Exotic	Medium
Saraca	spp.		Exotic	Medium
Schefflera	actinophylla	Umbrella Tree	NT Native	Medium
Schleichera	oleosa	Ceylon Oak	Exotic	High
Staphylea	pinnata	European Bladdernut	Exotic	Medium
Sterculia	quadrifida	Peanut Tree	NT Native	High
Sterculia	holtzei		NT Native	Inconclusive
Syzygium	forte	White Bush Apple	NT Native	High
Syzygium	nervosum	Daly River Satinash	NT Native	High
Syzygium	suborbiculare	Red Bush Apple	NT Native	High
Syzygium	minutuliflorum	Gove Satinash	NT Native	Medium
Syzygium	armstrongii	Bush Apple	NT Native	High
Syzygium	fibrosum	Small Red Bush Apple	NT Native	High
Syzygium	cumini	Java Plum	Australian Native	Low
Syzygium	angophoroides	Satinash	NT Native	Medium
Syzygium	jambos	Rose Apple	Exotic	Inconclusive
Syzygium	eucalyptoides subsp. eucalyptoides		NT Native	High

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Tabebuia	aurea	Silver Trumpet Tree	Exotic	Medium
Tabebuia	rosea	Rosy Trumpet Tree	Exotic	Medium
Tabebuia	pallida	Pink Trumpet Tree	Exotic	Medium
Tabebuia	palmerii		Exotic	Medium
Tabernaemontana	orientalis	Iodine bush	NT Native	High
Tamarindus	indica	Tamarind	Exotic	High
Tectona	grandis	Teak	Exotic	Medium
Terminalia	ferdinandiana	Billy Goat Plum	NT Native	High
Terminalia	microcarpa	Damson Plum	NT Native	High
Terminalia	catappa	Indian Almond	NT Native	High
Terminalia	platyphylla	Wild Plum	NT Native	Medium
Terminalia	arostrata	Nutwood	NT Native	Inconclusive
Terminalia	belliricia	Bahera	Exotic	Inconclusive
Terminalia	melanocarpa		Australian Native	Inconclusive
Timonius	timon	Tim-Tim	NT Native	High
Veitchia	merillii	Manilla palm	Exotic	High
Vitex	glabrata		NT Native	Inconclusive
Wrightia	pubescens	Wrightia	NT Native	Low
Xanthostemon	paradoxus	Bridal Tree	NT Native	High
Xanthostemon	chrysanthus	Golden Penda	Australian Native	High

APPENDIX B

TREES RECOMMENDED NOT TO BE PLANTED

Most of the species with a low cyclone resilience have been recommended to be avoided in plantings in Darwin. In addition, there are species that are highly cyclone resilient but are not recommended for planting in particular locations for other reasons such as being allergenic/poisonous, are invasive, or have nuisance fruit. These species are also included here in Appendix B.

Genus Name	Species Name	Sub species	Common Name	Notes
Acacia	auriculiformis		Black Wattle	Low cyclone resilience and high risk to property and life
Alstonia	scholaris		White Cheesewood	Highly allergenic
Artocarpus	altilis		Breadfruit	Large dangerous fruit
Artocarpus	heterophyllus		Jackfruit	Large dangerous fruit
Averrhoa	carambola		Star Fruit	Environmental weed
Azadirachta	indica		Neem	Declared weed
Carpentaria	acuminata		Carpentaria Palm	Caustic fruits
Caryota	spp.		Fishtail Palm	Low cyclone resilience and environmental weed
Cascabela	thevetia		Yellow Oleander	Low cyclone resilience and environmental weed
Cassia	fistula		Golden Shower	Environmental weed
Cassia	siamea		Siamese cassia	Environmental weed
Cocos	nucifera		Coconut Palm	Large dangerous fruit
Delonix	regia		Poinciana	Environmental weed
Eucalyptus	camaldulensis		River Red Gum	Low cyclone resilience and high risk to property and life

Genus Name	Species Name	Common Name	Origin	Cyclone resilience
Ficus	benjamina		Weeping Fig	Low cyclone resilience and high risk to property and life
Ficus	microcarpa	hillii	Hill's Weeping Fig	Low cyclone resilience and high risk to property and life
Gauzuma	ulmifolia		West Indian Elm	Environmental weed
Gmelina	arborea		Gmelina	Environmental weed
Khaya	senegalensis		African Mahogany	Low cyclone resilience and high risk to property and life
Khaya	grandifoliola		Big Leaf Mahogany	Low cyclone resilience and high risk to property and life
Khaya	nyasica		African Mahogany	Low cyclone resilience and high risk to property and life
Psidium	guajava		Guava	Environmental weed
Pterocarpus	indicus	pendula	Weeping Rosewood	Low cyclone resilience and disease prone
Spathodea	campanulata		African Tulip	Low cyclone resilience and environmental weed
Wodyetia	bifurcata		Fox Tail Palm	Low cyclone resilience and high risk to property and life

APPENDIX C
TREE SELECTION MATRIX (TEMPLATE)

Family Name

Genus Name

Species Name

Sub species Name

Common Name

Overall Species rating – select from ‘Preferred’, ‘Not to be planted’

Origin – select from ‘NT Native’, ‘Australian Native’, ‘Exotic’

Cyclone resilience – select from ‘High’, ‘Medium’, ‘Low’, ‘Unknown’

Cyclone Resilience source – select from ‘Marcus report’, ‘Yasi Report’, ‘Tracy report’, ‘Committee consensus’, ‘Personal observation’

Climate change resilience – select from ‘High’, Medium’, ‘Low’, ‘Unknown’

Species Leaf Type – select from ‘Evergreen’, ‘Deciduous’

Form – select from ‘Large tree (excurrent)’, ‘Large tree (decurrent)’, ‘Medium tree (excurrent)’, ‘Medium tree (decurrent)’, ‘Small tree (excurrent)’, ‘Small tree (decurrent)’, ‘Shrub’

Growth Rate – select from ‘Fast’, ‘Moderate’, ‘Slow’, ‘Unknown’

Longevity – select from ‘>50 years’, ‘20 - 49 years’, ‘10 - 19 years’, ‘<10 years’, ‘Unknown’

Height - meters

Spread - meters

References

Habitat – select from ‘Wet rainforest’, ‘Dry Rainforest’, ‘Eucalypt woodlands’, ‘Savannah’, ‘Coastal Wetlands’, ‘Riparian forest’

Succession category – select from ‘Pioneer’, ‘Intermediate’, ‘Climax’, ‘Unknown’

Suitable for large parks – select from ‘Suitable’, ‘Unsuitable’

Suitable for small parks – select from ‘Suitable’, ‘Unsuitable’

Suitable for road reserves – select from ‘Suitable’, ‘Unsuitable’

Suitable for Urban landscapes – select from ‘Suitable’, ‘Unsuitable’

Suitable for drainage swales – select from ‘Suitable’, ‘Unsuitable’

Irrigation requirement – select from ‘Dryland’, ‘Turf Irrigation’, ‘Deep watering’

Weed Status – select from ‘Non-invasive’, ‘Invasive – Undeclared’, ‘Declared Class A+C’, ‘Declared Class B+C’, ‘Unknown’

Notes

A further series of attributes are potentially useful and could be added to the selection matrix to aid in species selection. The following Table lists those attributes for consideration. However, for many of these attributes there are no or little data available particularly for native Top End trees. These attributes are listed primarily as an indication for future research.

Tree Species Additional Selection Criteria

- Water requirement (Drought tolerance)
- Water requirement (Waterlogging tolerance)
- Soil compaction tolerance
- Soil Ph. requirement
- Soil Volume requirement
- Soil Elements requirement
- Heat tolerance (temperature)
- Wind tolerance
- Pollution tolerance
- Light requirement (Shade tolerance)
- Mature Crown Size (Canopy cover potential)
- Paved Area tolerance
- Past Urban Performance (Adaptability)
- Shade Density
- Mature Crown Form
- Maintenance requirements
- Tree litter production
- Pathogen and pest susceptibility
- Allergen potential
- Power line (overhead) proximity suitability
- Stock quality
- Stock availability
- Aesthetic/Flowering attributes

APPENDIX D

PLANT PROCUREMENT CONTRACT TEMPLATE

CITY OF DARWIN – TREE PROCUREMENT SPECIFICATIONS
SINGLE PROJECT – SUPPLY OF PLANTS/TREES

Trees are generally the most visible element in the landscape. They are both living organisms and potentially very large structures that may live for many decades or even centuries.

It makes sense that trees that are ordered from growers should be of the best possible quality to ensure that they establish and succeed in the landscape. Money well spent at the early stages of a landscape project assists in more rapid returns on investment.

One of the most common reasons for the failure of newly planted trees to grow and establish in the landscape is poor quality stock, especially below ground. Girdled and kinked root systems limit the ability of the tree to take up water and nutrients and may provide inadequate support. Stems with inadequate taper cannot support themselves and encourage the use artificial supports such as stakes and ties. Tall plants in undersized containers generally have insufficient root volume to support them both biologically and physically.

Growing quality trees takes skill and care. Trees are living organisms that respond uniquely to their growing environment, including that of the nursery. Plants grown in containers can quickly reach their ‘use by date’ and must be sold, planted or potted-on to remain viable. Unlike manufactured items, they cannot be stored indefinitely and there will always be a degree of variability between even the most closely specified trees.

It is important to note that well-grown trees in themselves are not a guarantee of success in the landscape. The quality of trees is only one part of the process and must be combined with good planning and design, appropriate species selection, correct planting and establishment techniques and ongoing maintenance.

The majority of this Tree Procurement Contract’s Specifications are derived from *Specifying Trees: a guide to assessment of tree quality* by Ross Clark, published in 2003 by NATSPEC/Construction Information, Milsons Point. It is based on extensive measurement and assessment of nursery-grown trees.

CONDITIONS OF CONTRACT

CONTAINER TYPE AND PRODUCTION SPECIFICATION

All trees included in this growing contract are to be grown throughout all stages in 3 dimensional air root pruning containers. Standard smooth walled pots are not acceptable for this contract. Exact pots to be used are to be agreed to by City of Darwin prior to contract commencement.

Propagation from seed/cutting in seed trays is permissible, but production methods must have strict quality control mechanisms when pricking out to ensure no J-rooting or other root defects occur.

Potting-on of trees throughout various pot sizes throughout the production phase must be conducted during optimal root colonisation periods. Where possible, pot directly into the largest pot practical for plant growth and uninterrupted root development. Girdling roots or unconsolidated rootballs will not meet the required quality standard, and will be rejected.

Potting media is to conform with AS 3743-2003.

ABOVE GROUND STANDARD

The above ground qualities of a landscape tree are what is seen by the client, and generally what the trees will be judged on by the public. Maintaining an aesthetically pleasing crown, branches, and stem provides a desirable outcome. Correct nursery production of crown, branch and stem can also provide improved health, improved safety, and longer life expectancy to landscape trees.

The above-ground quality shall comply with the following requirements:

True to type

Individual trees and batches shall be clearly labelled. Correct botanical nomenclature is preferred.

Health and vigour

(a) *Health*—Foliage size, texture and colour at time of delivery shall be consistent with the size, texture and colour shown in healthy specimens of the nominated species.

(b) *Vigour*—Extension growth shall be consistent with that exhibited in healthy specimens of the species nominated.

Pest and disease

In general, trees shall show no evidence of pests or disease. However, a small amount of insect attack is common for native species (as they grow with their native pests).

Injury

Trees shall be free from injury, such as: damage caused by ties, stakes and labels, sunburn, rough handling or storms.

Self-supporting

Trees shall be self-supporting without the mechanical support of stakes/ties.

Stem taper

The stem diameter at any given point on the stem shall be greater than the stem diameter at any higher point on the stem.

Pruning

Pruning practices in the nursery impact on the aesthetics, the structural integrity or the health of the tree. It is important that pruning practices benefit the tree's development.

(c) All pruning shall be clean-cut at the branch collar.

(d) Any pruning has been carried out in such a way as to allow the tree to quickly seal the pruning wound, without long-term damage to the tree. Pruning should be in compliance with 'natural target' pruning undertaken as given in AS 4373.

(e) Pruning trees just before shipment should be minimized. Tree's shall been grown to conform with a specified clear stem height requirement throughout it's production, rather than having the lower branches removed just before shipment.

(f) Stress on the trunk is reduced, healthy growth rates are maintained and adequate stem taper is maintained by not lifting the crown of the tree too high.

Apical dominance

For trees with an excurrent form, trees supplied shall have a defined central leader with the apical bud intact.

Crown symmetry

Difference in crown distribution on opposite sides of the stem axis shall not exceed 20%.

Stem structure

For trees with excurrent form, there shall be a single stem in the centre of the crown.

For trees with decurrent form, the central stem shall not be divided at any point lower than the clean stem height specified and the stem junction at the point of division must be sound.

For all trees, branch diameter should be less than or equal to one-half of the stem diameter immediately above the branch junction.

Included bark

Included bark in crotches is a common cause of structural weakness in the branch or stem junction and can result in breakages during storms. Many failures in mature trees occur as a result of increased leverage on weakly attached stems or branches.

The branch/stem bark ridges at junctions between stems and branches and between City of Darwinominant stems shall be convex.

Trunk position

To allow the development of the root system symmetrically about the trunk it is important that the trunk of the tree is in the middle of the rootball.

The distance from the centre of the trunk to the extremity of the rootball shall not vary by more than 10%. The smallest dimension must not be less than 90% of the largest dimension.

Indication of North

The correct orientation of a tree can be important to the success of that tree in its new location (i.e. ensuring that the cambium sheltered from the sun in the nursery is not exposed on planting). This is particularly important in large trees. For trees in containers larger than 100 L, the northerly aspect in the nursery must be clearly indicated in such a way as to not be erased or misplaced in transit.

BELOW GROUND STANDARD

The tree below ground (the root system) is what we do not see and specifications generally do not deal with it well, if at all. The root system, however, is just as important as the tree above ground and, as such, should receive the same amount of attention. The root system of a landscape tree must have enough overall surface area, and be sufficient to take up water and nutrients. Importantly, it must also be well structured so it can grow-on and support the tree indefinitely.
The below-ground quality shall comply with the following requirements:

Root division

Two important aspects of root division are:

Total division.

Pattern of division.

The ability of a root system to take up moisture and nutrients is directly related to the surface area of the root system, which, in turn, is directly related to root division. Roots must divide and divide again (total division). Root systems with inadequate division not only suffer from a reduced surface area but also offer too few points for new roots to develop.

Not only should roots divide repeatedly but the pattern of this division is also important. Division should be outwardly progressive (primary division) to ensure a strong structural base for any later root development. Trees held too long in containers (above ground or in-ground) may exhibit excessive non-directed division. While this may provide root surface area, it adversely impacts on root structure and makes the rootball hydrophobic.

For small trees, the entire rootball must be occupied by fibrous roots. However, for large trees it is possible to use a range of techniques in the early and intermediate stages of growth, providing that there is enough division within the rootball to support the tree adequately at the time of sale.

For trees in containers less than 45 L, roots must have undergone primary division at not more than 100 mm intervals.

For trees in containers greater than or equal to 45 L, roots within the outer 50% of the rootball must also have undergone primary division at not more than 150 mm intervals.

Root direction

Roots, from the point of initiation, should generally grow in an outwards (radial) or downwards direction. Any deviation from the established direction must not exceed 45o.

During below-ground inspection, no evidence of kinked taproots or of circling roots shall be found within the rootball.

Rootball occupancy

On shaking or handling the unsupported rootball at least 90% of the soil volume must remain intact.

Rootball depth

For trees in containers over 45 L, rootballs shall have a diameter greater than or equal to their depth.

Height of root crown

The root crown is the junction between the belowground parts and aboveground parts of the tree. Regardless of the size of the tree the root crown belongs at the surface of the rootball. Burying the root crown can lead to fungal infections, serious disruptions of the root system’s structure and function or to the death of the tree.

The root crown shall be at the surface of the rootball, and not below.

Rootball protection in transit
The combination of container and handling system shall deliver the rootball intact.

INSPECTION AND SAMPLING

All trees included in this growing contract will be subject to inspection and/or sampling.

The grower is to complete inspections at 3 monthly intervals and report to City of Darwin using the tree inspection form (see Appendix).

Prior to dispatch/shipment from grower, City of Darwin Arborist/Project Manager shall conduct an inspection using the tree inspection form (see Appendix).

Non-compliance may lead to rejection of the entire batch, and/or payment withheld for all/non-compliant individual trees from batch.

INSPECTION SAMPLING TABLE

Number of trees per batch	Number of trees to sample
0–20	1
21–50	2
51–100	4
101–500	4 for the first 100 + 2% of balance of order
501–2000	12 for first 500 + 1% of balance of order
2001+	27 for the first 2000 + 0.5% of balance of order

Inspection shall include visual assessment based on the tree inspection form criteria, and the following steps:

Step 1 Remove any stakes. If the tree is then not self-supporting, reject the tree. If the tree is self-supporting and less than 45 L, proceed to step 2. If the tree is self-supporting and greater than or equal to 45 L, proceed to step 3.

Step 2 Place the tree on a level surface ensuring that the root ball is well watered. Hold the stem at 80% of the total stem height. Bend the stem

making sure that the pressure is always at right angles to the position of the stem. The stem should be able to be bent 30° side to side without the root ball lifting off the ground (see Figure B1). If the root ball rocks such that it lifts off the ground then the root ball is too small to be able to support the tree without stakes.

Step 3 Holding the stem at 25% height above the rootball surface, rock the stem vigorously from side to side. There must be no evidence of movement of the stem within the rootball and there must be no evidence of cracks in the rootball at the edge of previous container(s). These indicate previous pottings, which were not correctly rootpruned, or a lack of root division at that point.

Step 4 Remove the tree from the container or remove the hessian or in-ground container or otherwise peel back any wrapping to expose the exterior of the rootball.1 Check that any confused or circling roots at the outside of the rootball have diameter of less than 25% of the stem diameter at ground level for trees of less than 40 mm and less than 10 mm in diameter for trees with a stem diameter at ground level of 40 mm or more. Investigative inspection usually takes two basic forms: destructive (complete) or partial.

Destructive and partial rootball inspections

With destructive rootball inspection, all of the soil from the rootball is washed away (using water or compressed air) to give a clear picture of how the root system has developed. However, as this destroys the tree destructive inspection will generally be carried out infrequently.

Where destructive inspection is deemed necessary, trees will be sacrificed. (The trees sacrificed will be in addition to the number of trees required.) The cost of these plants can either be built into the supplier's price when quoting for supply or itemised as an additional cost.

Where sacrifice of plants is a nominated expense they should be paid for:

1. By the purchaser, if the batch is found to conform.
2. By the supplier, if the batch fails to conform.

With partial rootball inspection, a section of the rootball, sufficient to enable inspection of the root development from the stem to the outer extremity of the rootball (generally a wedge-shaped section), is washed away (using water or compressed air).

Removal of a wedge-shaped section of the rootball of trees in 5-100 L sizes is generally practical. In such cases, ensure that sufficient media is removed to inspect the root development in the upper 150-200 mm of the rootball, from the stem to the extremity, and the outer section of the rootball – top to bottom.

Balance Inspection for Small trees

Balance (small trees) assessment requirements:

(a) Tubes or plant cells: height above rootball surface must be between 1.5 and 2.5 times the height of the tube or plant cell.

(b) Trees in containers < 45 L (other than tubes or plant cells) or ex-ground trees of Size Index < 57 (e.g. 1.9 m high × 30 mm calliper); height must fall within the range indicated for the container size in **Small container-grown trees table**.

(c) Containers/rootballs (other than tubes or plant cells) must remain flat on the ground when the stem, held at 80% of height above the rootball surface, is deflected 30º from the vertical, side to side.

Exempt: Species that naturally produce hard inflexible wood in the early stages of their development.

SMALL CONTAINER-GROWN TREES TABLE

Container size (or minimum rootball diameter)	Height range (m)	
	Thin stemmed species	Thick-stemmed species
Tubes or plant cells	Tree height between 1.5 and 2.5 × container height	
150 mm (1.8L)	0.4 – 0.6	0.3 – 0.5
180 mm (2.6L)	0.5 – 0.7	0.4 – 0.6
200 mm pot (4L)	0.7 – 0.9	0.6 – 0.8
200 mm bag (5L)	0.8 – 1.0	0.7 – 0.9
240 mm (8L)	1.0 – 1.2	0.8 – 1.0
300 mm (15L)	1.2 – 1.5	1.0 – 1.2
330 mm (25L)	1.5—1.9	1.2—1.6
400 mm (35L)	1.8—2.2	1.4—1.9

Balance inspection for Large trees

Balance (large trees) assessment requirements:

(g) For trees grown in containers ≥ 45 L, the Size Index must lie within the range for the nominal container size shown in the **Common container volumes – Size index range table**.

COMMON CONTAINER VOLUMES – SIZE INDEX RANGE

Size index	Nominal container volume (L)	Size index	Nominal container volume (L)
57–74	45	453–587	550
77–99	60	495–640	600
83–107	75	533–716	700
111–143	100	632–818	800
154–200	150	711–921	900
194–251	200	791–1023	1000
227–314	250	842–1089	1100
273–353	300	918–1188	1200
289–373	350	1148–1485	1500
330–427	400	1530–1980	2000
371–480	450	1913–2475	2500
412–518	500		

Size Index is an indicator of the tree's size above ground expressed as a simple number. Size Index is calculated by multiplying the height (m) by the calliper (mm, measured at 300 mm above ground), as follows:

Size Index = height (m) × calliper (mm)

APPENDIX 1. OF PLANT PROCUREMENT CONTRACT
TREE INSPECTION FORM

General	
Date	Reference/Purchase Order No.
Purchaser	
Supplier	Inspected by (supplier/purchaser/agent)
Species	Batch identification
Number of trees in batch	Container/rootball size
Height range	Calliper range
Special requirements	
Above ground	
Labelling	☐
Health and vigour	☐
Freedom from pests and disease	☐
Freedom from injury	☐
Self-supporting	☐
Stem taper	☐
Pruning	☐
Apical dominance	☐
Crown symmetry	☐
Stem structure	☐

Included bark	☐	
Trunk position	☐	
Compatibility of graft unions	☐	
Indication of north	☐	
Below ground	☐	
Inspection method used	☐	External only
	☐	External plus investigative
	☐	destructive ☐ Partial
Number of trees in sample	☐	
Root division	☐	
Root direction	☐	
Diameter nonconforming roots at rootball extremity	☐	
Rootball occupancy	☐	
Rootball depth	☐	
Height of root crown	☐	
Non-suckering rootstock	☐	
Balance		
Balance	☐	

Conformance with specification				
Conforming	☐	Yes	☐	No
Comments				

Name and signature (inspector)

Plant Schedule

Genus	Species	Quantity	Container volume (L)	Height (M)	Calliper (mm)	Supply Date	Unit Price (inc.GST)	Species Total Price (inc.GST)

APPENDIX 2. OF PLANT PROCUREMENT CONTRACT
SUPPLY OF TREES/PLANTS FOR CITY OF DARWIN PROJECT

(Standing Offer)
The Chief Executive Officer
City of Darwin
I/We the undersigned hereby offer to supply the goods as described in the attached document for the period stated and subject to the conditions/specifications prescribed herein. I/We agree to supply the goods within the delivery time and in accordance with the delivery terms stated.

Signed	
Print Name	
Date	
On Behalf of	
ABN	
Postal Address	

Telephone		**Facsimile**	

Signature of Witness	

Print Name	

Date	

APPENDIX E
TREE PLANTING SPECIFICATIONS - TREE PIT SOIL VOLUMES

Tree pit volumes should be calculated using the formula from the NATSPEC Specification for landscape trees (www.natspec.com.au) Required soil volume (m^3) = (Height (m) X DBH (mm) divided by 100.

e.g. the required soil volume for a *Mimusops elengi* would be 10(m) X 450(mm) divided by 100 = $45m^3$
In locations with constraints where the NATSPEC specified volumes cannot be met, tree pit volumes must be at least 60% of the calculated volume, or a smaller tree species should be selected.

Trees planted in turf or garden areas without physical restrictions on the growth of tree roots are exempt from this calculation.

Establishing A Resilient Urban Forest For Darwin

CITY OF DARWIN

PREFERRED TREES FOR DARWIN

Why are some species with a medium or low cyclone resilience rating included in the list of Preferred Trees for Darwin ?

A tree with low cyclone resilience may have an attribute such as form, colour, wildlife attractant that is desirable in a specific location. Where these trees are small, such as many Grevilleas and Acacias, and unlikely to cause damage in the event of uprooting, they have been included in the list of **Preferred Trees for Darwin**.

Similarly, trees that have been recognised as having a **medium cyclone resilience** because of issues with branch drop or trunk splitting are included here. The use of these species needs to be tempered by an understanding of their performance in storm events and careful consideration of the planting location.

Recommendations are for the City of Darwin municipality.

BOTANICAL NAME	COMMON NAME	ORIGIN	CYCLONE RESILIENCE
ACACIA DUNNII	ELEPHANT EAR WATTLE	NT NATIVE	LOW
ACACIA TORULOSA		NT NATIVE	LOW
ACACIA LATESCENS		NT NATIVE	MEDIUM
ADANSONIA GREGORII	BOAB	NT NATIVE	HIGH
ADANSONIA DIGITATA	AFRICAN BOAB	EXOTIC	MEDIUM
ADENANTHERA PAVONINA	RED BEAD TREE	NT NATIVE	MEDIUM
AIDIA RACEMOSA	ARCHER CHERRY	NT NATIVE	HIGH
ALBIZIA LEBBECK	WHITE SIRIS	NT NATIVE	MEDIUM
ALBIZIA SAMAN	RAIN TREE	EXOTIC	MEDIUM
ALLOSYNCARPIA TERNATA	ALLOSYNCARPIA	NT NATIVE	MEDIUM
ALPHITONIA EXCELSA	RED ASH	NT NATIVE	MEDIUM
ALSTONIA ACTINOPHYLLA	NORTHERN MILKWOOD	NT NATIVE	HIGH
ANTIDESMA GHAESEMBILLA		NT NATIVE	HIGH
ARAUCARIA CUNNINGHAMII	HOOP PINE	AUSTRALIAN NATIVE	MEDIUM
ARCHONTOPHOENIX ALEXANDREA	ALEXANDRA PALM	AUSTRALIAN NATIVE	HIGH
ARFEUILLEA ARBORESCENS	HOP TREE	EXOTIC	HIGH
ASTEROMYRTUS MAGNIFICA		NT NATIVE	HIGH
ASTEROMYRTUS SYMPHYOCARPA	LINIMENT TREE	NT NATIVE	HIGH
BANKSIA DENTATA		NT NATIVE	HIGH
BARRINGTONIA ASIATICA	POISON TREE	EXOTIC	HIGH
BARRINGTONIA ACUTANGULA	FRESHWATER MANGROVE	NT NATIVE	MEDIUM
BAUHINIA VARIEGATA	PURPLE BAUHINIA	EXOTIC	LOW
BERRYA CORDIFOLIA	TRINCOMALEE	EXOTIC	INCONCLUSIVE
BISMARKIA NOBILIS	BISMARK PALM	EXOTIC	MEDIUM
BOMBAX CEIBA	KAPOK TREE	NT NATIVE	HIGH
BRACHYCHITON DIVERSIFOLIUS	KURRAJONG	NT NATIVE	HIGH
BRACHYCHITON RUPESTRIS		AUSTRALIAN NATIVE	INCONCLUSIVE
BROWNEA SPP.		EXOTIC	MEDIUM
BROWNEOPSIS UCAYALINA		EXOTIC	HIGH
BUCHANANIA ARBORESCENS	LITTLE GOOSEBERRY TREE	NT NATIVE	HIGH
BUCHANANIA OBOVATA	GREEN PLUM	NT NATIVE	HIGH
CAESALPINIA FERREA	LEOPARD TREE	EXOTIC	MEDIUM
CALLISTEMON VIMINALIS	WEEPING BOTTLEBRUSH	AUSTRALIAN NATIVE	HIGH
CALLITRIS INTRATROPICA	NORTHERN CYPRESS PINE	NT NATIVE	HIGH
CALOPHYLLUM INOPHYLLUM	BEAUTY LEAF	NT NATIVE	HIGH
CALOPHYLLUM SIL		NT NATIVE	HIGH
CANARIUM AUSTRALIANUM	MELVILLE ISLAND WHITE BEECH	NT NATIVE	HIGH
CARALLIA BRACHIATA	BUSH CURRENT	NT NATIVE	HIGH
CASSIA NODOSA	RAINBOW SHOWER	EXOTIC	HIGH
CASTANOSPERMUM AUSTRALE	BLACK BEAN	AUSTRALIAN NATIVE	HIGH
CASUARINA EQUISETIFOLIA	COASTAL SHE-OAK	NT NATIVE	MEDIUM
CASUARINA PAPUANA		EXOTIC	MEDIUM
CASUARINA CUNNINGHAMIANA	RIVERINE CASUARINA	NT NATIVE	INCONCLUSIVE
CELTIS PHILIPPENSIS		NT NATIVE	HIGH
CITHAREXYLUM SPINOSUM	FIDDLEWOOD	EXOTIC	MEDIUM
CITRUS LATIFOLIA	LIME	EXOTIC	HIGH
CLERODENDRUM FLORIBUNDUM	CLERODENDRUM	NT NATIVE	MEDIUM
COELOSPERMUM RETICULATUM		NT NATIVE	LOW
CORDIA SUBCORDATA	KEROSENE WOOD	NT NATIVE	MEDIUM

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Establishing A Resilient Urban Forest For Darwin

CITY OF DARWIN

PREFERRED TREES FOR DARWIN

Why are some species with a medium or low cyclone resilience rating included in the list of Preferred Trees for Darwin ?

A tree with low cyclone resilience may have an attribute such as form, colour, wildlife attractant that is desirable in a specific location. Where these trees are small, such as many Grevilleas and Acacias, and unlikely to cause damage in the event of uprooting, they have been included in the list of **Preferred Trees for Darwin**.

Similarly, trees that have been recognised as having a **medium cyclone resilience** because of issues with branch drop or trunk splitting are included here. The use of these species needs to be tempered by an understanding of their performance in storm events and careful consideration of the planting location.

Recommendations are for the City of Darwin municipality.

BOTANICAL NAME	COMMON NAME	ORIGIN	CYCLONE RESILIENCE
CORYMBIA PTYCHOCARPA	SWAMP BLOODWOOD	AUSTRALIAN NATIVE	MEDIUM
CORYMBIA POLYCARPA	LONG-FRUITED BLOODWOOD	AUSTRALIAN NATIVE	MEDIUM
CORYMBIA BLEESERI	SMOOTH STEMMED BLOODWOOD	NT NATIVE	MEDIUM
CORYMBIA JACOBSIANA	STRING BARKED BLOODWOOD	NT NATIVE	MEDIUM
CORYMBIA ARNHEMENSIS	KATHERINE GORGE BLOODWOOD	NT NATIVE	MEDIUM
CORYMBIA PAPUANA	GHOST GUM	AUSTRALIAN NATIVE	MEDIUM
CORYMBIA POLYSCIADA	APPLE GUM	NT NATIVE	MEDIUM
CORYMBIA BELLA	GHOST GUM/WHITE GUM	NT NATIVE	MEDIUM
CUPANIOPSIS ANACARDIOIDES	TUCKEROO	NT NATIVE	HIGH
CYCLOPHYLLUM SCHULTZII	CANTHIUM	NT NATIVE	HIGH
DENHAMIA OBSCURA	DENHAMIA	NT NATIVE	HIGH
DILLENIA ALATA	RED BEECH	NT NATIVE	MEDIUM
DILLENIA INDICA	ELEPHANT APPLE	AUSTRALIAN NATIVE	MEDIUM
DIOSPYROS COMPACTA	AUSTRALIAN EBONY	NT NATIVE	HIGH
DIOSPYROS MARITIMA	BROAD LEAVED EBONY	NT NATIVE	HIGH
DIOSPYROS NIGRA	BLACK SAPOTE	EXOTIC	MEDIUM
DODONEA PLATYPTERA	HOP BUSH	NT NATIVE	LOW
DYPSIS LUTESCENS	GOLDEN CANE	EXOTIC	HIGH
DYPSIS MADAGASCARIENSIS	MALAGASY PALM	EXOTIC	HIGH
ELAEIS GUINEENSIS	AFRICAN OIL PALM	EXOTIC	HIGH
ERYTHRINA VARIEGATA	CORAL TREE	NT NATIVE	MEDIUM
ERYTHROPHLEUM CHLOROSTACHYS	IRONWOOD	NT NATIVE	HIGH
EUCALYPTUS APODOPHYLLA	WHITE BARK	NT NATIVE	HIGH
EUCALYPTUS ALBA	WHITE GUM/SALMON GUM	NT NATIVE	MEDIUM
EUCALYPTUS HERBERTIANA	HERBERT'S GUM	NT NATIVE	HIGH
EUCALYPTUS NESOPHILA	MELVILLE ISLAND BLOODWOOD	NT NATIVE	HIGH
EUCALYPTUS BIGALERITA	NORTHERN SALMON GUM	NT NATIVE	MEDIUM
EUCALYPTUS MINIATA	DARWIN WOOLLYBUTT	NT NATIVE	MEDIUM
EUCALYPTUS OLIGANTHA	BROAD-LEAVED BOX	NT NATIVE	MEDIUM
EUCALYPTUS PHOENICEA	SCARLET GUM	NT NATIVE	MEDIUM
EUCALYPTUS TECTIFICA	DARWIN BOX	NT NATIVE	MEDIUM
EUCALYPTUS TETRODONTA	NORTHERN STRINGYBARK	NT NATIVE	MEDIUM
EUCALYPTUS TINTINNANS	HILLS SALMON GUM	NT NATIVE	MEDIUM
FAGRAEA RACEMOSA	FAGRAEA	NT NATIVE	INCONCLUSIVE
FICUS SCOBINA	SANDPAPER FIG	NT NATIVE	HIGH
FICUS VIRENS	BANYAN	NT NATIVE	HIGH
FICUS CORONULATA	PEACH-LEAF FIG	NT NATIVE	HIGH
FICUS OPPOSITA	SANDPAPER FIG	NT NATIVE	HIGH
FICUS RACEMOSA	CLUSTER FIG	NT NATIVE	HIGH
FICUS RUBIGNOSA	PORT JACKSON FIG	AUSTRALIAN NATIVE	MEDIUM
FICUS LONGIFOLIA	NARROW LEAF FIG	EXOTIC	MEDIUM
FICUS BRACHYPODA	ROCK FIG	NT NATIVE	INCONCLUSIVE
GANOPHYLLUM FALCATUM	SCALY ASH	NT NATIVE	MEDIUM
GARDENIA MEGASPERMA		NT NATIVE	HIGH
GARDENIA FUCATA		NT NATIVE	MEDIUM
GREVILLEA ANGULATA	HOLLY LEAF GREVILLEA	NT NATIVE	HIGH
GREVILLEA HELIOSPERMA	ROCK GREVILLEA	NT NATIVE	HIGH
GREVILLEA PARALLELA	SILVER OAK	NT NATIVE	LOW
GREVILLEA PTERIDIFOLIA	FERN-LEAVED GREVILLEA	NT NATIVE	LOW

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Establishing A Resilient Urban Forest For Darwin

CITY OF DARWIN

PREFERRED TREES FOR DARWIN

Why are some species with a medium or low cyclone resilience rating included in the list of Preferred Trees for Darwin ?

A tree with low cyclone resilience may have an attribute such as form, colour, wildlife attractant that is desirable in a specific location. Where these trees are small, such as many Grevilleas and Acacias, and unlikely to cause damage in the event of uprooting, they have been included in the list of **Preferred Trees for Darwin**.

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Recommendations are for the City of Darwin municipality.

BOTANICAL NAME	COMMON NAME	ORIGIN	CYCLONE RESILIENCE
GREVILLEA REFRACTA	SILVER-LEAF GREVILLEA	NT NATIVE	MEDIUM
GREVILLEA DECURRENS	CLOTHES-PEG TREE	NT NATIVE	MEDIUM
HELICIA AUSTRALASICA	HELICIA	NT NATIVE	INCONCLUSIVE
HIBICUS TILIACEOUS	BEACH HIBISCUS	NT NATIVE	MEDIUM
HIBICUS TILIACEOUS VAR. RUBRA	RED BEACH HIBISCUS	NT NATIVE	MEDIUM
HORSEFIELDIA AUSTRALIANA	NUT HORSFIELDIA	NT NATIVE	HIGH
HYDRIASTELE WENDLANDIANA	FLORENCE FALLS PALM	NT NATIVE	HIGH
HYOPHORBE VERSCHAFFELTII	SPINDLE PALM	EXOTIC	HIGH
JACKSONIA DILATATA	JACKSONIA	NT NATIVE	HIGH
KIGELIA PINNATA	SAUSAGE TREE	EXOTIC	HIGH
LAGERSTROEMIA INDICA	CREPE MYRTLE	EXOTIC	HIGH
LAGERSTROEMIA SPECIOSA	PRIDE OF INDIA	EXOTIC	MEDIUM
LATANIA LODDIGESII	BLUE LATAN PALM	EXOTIC	HIGH
LEPTOSPERMUM MADIDUM	WEEPING TEA TREE	NT NATIVE	HIGH
LICUALA RAMSAYII	QUEENSLAND FAN PALM	AUSTRALIAN NATIVE	HIGH
LIVISTONA BENTHAMII	BENTHAMS FAN PALM	NT NATIVE	HIGH
LIVISTONA HUMILIS	SAND PALM	NT NATIVE	HIGH
LIVISTONA INERMIS	WHISPY FAN PALM	NT NATIVE	HIGH
LIVISTONA MARIAE SUBSP. RIGIDA	MATARANKA FAN PALM	NT NATIVE	HIGH
LIVISTONA MUELLERI	NORTHERN CABBAGE PALM	AUSTRALIAN NATIVE	HIGH
LOPHOSTEMON GRANDIFLORUS SUBSP. RIPARIUS	NORTHERN SWAMP BOX	NT NATIVE	HIGH
LOPHOSTEMON LACTIFLUUS	SWAMP BOX	NT NATIVE	HIGH
LYRATA PANDURATA	FIDDLELEAF FIG	EXOTIC	INCONCLUSIVE
MANGIFERA INDICA	MANGO	EXOTIC	MEDIUM
MANILTOA LENTICELLATA	SILK HANDKERCHIEF TREE	AUSTRALIAN NATIVE	HIGH
MARANTHES CORYMBOSA	WHITE CLOUD TREE	NT NATIVE	HIGH
MELALEUCA LEUCADENDRA	WEEPING PAPERBARK	NT NATIVE	HIGH
MELALEUCA ARGENTEA	SILVER-LEAVED PAPERBARK	NT NATIVE	HIGH
MELALEUCA BRACTEATA	BLACK TEA TREE	NT NATIVE	HIGH
MELALEUCA CAJUPUTI	PAPERBARK	NT NATIVE	HIGH
MELALEUCA DEALBATA	PAPERBARK	NT NATIVE	HIGH
MELALEUCA MINUTIFOLIA	PAPERBARK	NT NATIVE	HIGH
MELALEUCA NERVOSA	FIBREBARK	NT NATIVE	HIGH
MELICOPE ELLERYANA	EUODIA	NT NATIVE	LOW
MICROMELUM MINUTUM		NT NATIVE	HIGH
MILIUSA BRAHEI	MILIUSA	NT NATIVE	HIGH
MILLETTIA PINNATA	INDIAN BEECH	NT NATIVE	MEDIUM
MIMUSOPS ELENGI (CULTIVATED)	MIMUSOPS RED CONDOO	EXOTIC	HIGH
MIMUSOPS ELENGI (NT NATIVE)	MIMUSOPS	NT NATIVE	HIGH
MIMUSOPS ELENGI CV. STREET ELEGANCE	MIMUSOPS “STREET ELEGANCE”	EXOTIC	HIGH
MONOON AUSTRALE	NORTHERN TERRITORY POLYALTHIA	NT NATIVE	MEDIUM
MORINDA CITRIFOLIA	ROTTEN CHEESEFRUIT	NT NATIVE	HIGH
MYOPORUM ACUMINATUM	BOOBIALLA	AUSTRALIAN NATIVE	INCONCLUSIVE
MYRISTICA INSIPIDA	WILD NUTMEG	NT NATIVE	HIGH
NAUCLEA ORIENTALIS	LEICHARDT TREE	NT NATIVE	HIGH
PELTOPHORUM PTEROCARPUM	YELLOW FLAME TREE	NT NATIVE	MEDIUM
PERSOONIA FALCATA	MILKY PLUM	NT NATIVE	HIGH
PETALOSTIGMA PUBESCENS	QUININE TREE	NT NATIVE	HIGH
PHALERIA CLERODENDRUM	BUTTERFLY TREE/SCENTED DAPHNE	AUSTRALIAN NATIVE	HIGH

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Establishing A Resilient Urban Forest For Darwin

CITY OF DARWIN

PREFERRED TREES FOR DARWIN

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BOTANICAL NAME	COMMON NAME	ORIGIN	CYCLONE RESILIENCE
PITTOSPORUM MOLUCCANUM		NT NATIVE	MEDIUM
PITTOSPORUM ANGUSTIFOLIUM	NATIVE APRICOT	NT NATIVE	INCONCLUSIVE
PLANCHONIA CAREYA	COCKY APPLE	NT NATIVE	HIGH
PLEIOGYNIUM TIMORIENSE	BURDEKIN PLUM	AUSTRALIAN NATIVE	HIGH
PLUMERIA OBTUSA	SINGAPORE FRANGIPANI	EXOTIC	HIGH
PLUMERIA RUBRA	FRANGIPANI	EXOTIC	HIGH
POLYALTHIA LONGIFOLIA	POLYALTHIA	EXOTIC	MEDIUM
POLYALTHIA LONGIFOLIA SUBSP. PENDULA	INDIAN MAST TREE	EXOTIC	MEDIUM
PTEROCARPUS INDICUS	PNG ROSEWOOD	EXOTIC	MEDIUM
PTYCHOSPERMA MACARTHURII	MACARTHUR PALM	NT NATIVE	HIGH
ROYSTONEA REGIA	CUBAN ROYAL PALM	EXOTIC	MEDIUM
SARACA SPP.		EXOTIC	MEDIUM
SCHEFFLERA ACTINOPHYLLA	UMBRELLA TREE	NT NATIVE	MEDIUM
SCHLEICHERA OLEOSA	CEYLON OAK	EXOTIC	HIGH
STAPHYLEA PINNATA	EUROPEAN BLADDERNUT	EXOTIC	MEDIUM
STERCULIA QUADRIFIDA	PEANUT TREE	NT NATIVE	HIGH
STERCULIA HOLTZEI		NT NATIVE	INCONCLUSIVE
SYZYGIUM FORTE	WHITE BUSH APPLE	NT NATIVE	HIGH
SYZYGIUM NERVOSUM	DALY RIVER SATINASH	NT NATIVE	HIGH
SYZYGIUM SUBORBICULARE	RED BUSH APPLE	NT NATIVE	HIGH
SYZYGIUM MINUTULIFLORUM	GOVE SATINASH	NT NATIVE	MEDIUM
SYZYGIUM ARMSTRONGII	BUSH APPLE	NT NATIVE	HIGH
SYZYGIUM FIBROSUM	SMALL RED BUSH APPLE	NT NATIVE	HIGH
SYZYGIUM CUMINI	JAVA PLUM	AUSTRALIAN NATIVE	LOW
SYZYGIUM ANGOPHOROIDES	SATINASH	NT NATIVE	MEDIUM
SYZYGIUM JAMBOS	ROSE APPLE	EXOTIC	INCONCLUSIVE
SYZYGIUM EUCALYPTOIDES		NT NATIVE	HIGH
TABEBUIA AUREA	SILVER TRUMPET TREE	EXOTIC	MEDIUM
TABEBUIA ROSEA	ROSY TRUMPET TREE	EXOTIC	MEDIUM
TABEBUIA PALLIDA	PINK TRUMPET TREE	EXOTIC	MEDIUM
TABEBUIA PALMERII		EXOTIC	MEDIUM
TABERNAEMONTANA ORIENTALIS	IODINE BUSH	NT NATIVE	HIGH
TAMARINDUS INDICA	TAMARIND	EXOTIC	HIGH
TECTONA GRANDIS	TEAK	EXOTIC	MEDIUM
TERMINALIA FERDINANDIANA	BILLY GOAT PLUM	NT NATIVE	HIGH
TERMINALIA MICROCARPA	DAMSON PLUM	NT NATIVE	HIGH
TERMINALIA CATAPPA	INDIAN ALMOND	NT NATIVE	HIGH
TERMINALIA PLATYPHYLLA	WILD PLUM	NT NATIVE	MEDIUM
TERMINALIA AROSTRATA	NUTWOOD	NT NATIVE	INCONCLUSIVE
TERMINALIA BELLIRICIA	BAHERA	EXOTIC	INCONCLUSIVE
TERMINALIA MELANOCARPA		AUSTRALIAN NATIVE	INCONCLUSIVE
TIMONIUS TIMON	TIM-TIM	NT NATIVE	HIGH
VEITCHIA MERILLII	MANILLA PALM	EXOTIC	HIGH
VITEX GLABRATA		NT NATIVE	INCONCLUSIVE
WRIGHTIA PUBESCENS	WRIGHTIA	NT NATIVE	LOW
XANTHOSTEMON PARADOXUS	BRIDAL TREE	NT NATIVE	HIGH
XANTHOSTEMON CHRYSANTHUS	GOLDEN PENDA	AUSTRALIAN NATIVE	HIGH

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Establishing A Resilient Urban Forest For Darwin

TREES RECOMMENDED NOT TO BE PLANTED

CITY OF DARWIN

Why are some species with a medium or high cyclone resilience rating included in the list of Trees Recommended NOT to be Planted in Darwin ?

Most of the species with a low cyclone resilience have been recommended to be avoided in plantings in Darwin. In addition, there are species that are highly cyclone resilient but are not recommended for planting in particular locations for other reasons such as being allergenic/poisonous, are invasive, or have nuisance fruit. These species are also included in the list of **Trees Recommended NOT to be Planted**.

Recommendations are for the City of Darwin municipality.

BOTANICAL NAME	COMMON NAME	NOTES
ACACIA AURICULIFORMIS	BLACK WATTLE	LOW CYCLONE RESILIENCE AND HIGH RISK TO PROPERTY AND LIFE
ALSTONIA SCHOLARIS	WHITE CHEESEWOOD	HIGHLY ALLERGENIC
ARTOCARPUS ALTILIS	BREADFRUIT	LARGE DANGEROUS FRUIT
ARTOCARPUS HETEROPHYLLUS	JACKFRUIT	LARGE DANGEROUS FRUIT
AVERRHOA CARAMBOLA	STAR FRUIT	ENVIRONMENTAL WEED
AZADIRACHTA INDICA	NEEM	DECLARED WEED
CARPENTARIA ACUMINATA	CARPENTARIA PALM	CAUSTIC FRUITS
CARYOTA SPP.	FISHTAIL PALM	LOW CYCLONE RESILIENCE AND ENVIRONMENTAL WEED
CASCABELA THEVETIA	YELLOW OLEANDER	LOW CYCLONE RESILIENCE AND ENVIRONMENTAL WEED
CASSIA FISTULA	GOLDEN SHOWER	ENVIRONMENTAL WEED
CASSIA SIAMEA	SIAMESE CASSIA	ENVIRONMENTAL WEED
COCOS NUCIFERA	COCONUT PALM	LARGE DANGEROUS FRUIT
DELONIX REGIA	POINCIANA	ENVIRONMENTAL WEED
EUCALYPTUS CAMALDULENSIS	RIVER RED GUM	LOW CYCLONE RESILIENCE AND HIGH RISK TO PROPERTY AND LIFE
FICUS BENJAMINA	WEEPING FIG	LOW CYCLONE RESILIENCE AND HIGH RISK TO PROPERTY AND LIFE
FICUS MICROCARPA HILLII	HILL'S WEEPING FIG	LOW CYCLONE RESILIENCE AND HIGH RISK TO PROPERTY AND LIFE
GAUZUMA ULMIFOLIA	WEST INDIAN ELM	ENVIRONMENTAL WEED
GMELINA ARBOREA	GMELINA	ENVIRONMENTAL WEED
KHAYA SENEGALENSIS	AFRICAN MAHOGANY	LOW CYCLONE RESILIENCE AND HIGH RISK TO PROPERTY AND LIFE
KHAYA GRANDIFOLIOLA	BIG LEAF MAHOGANY	LOW CYCLONE RESILIENCE AND HIGH RISK TO PROPERTY AND LIFE
KHAYA NYASICA	AFRICAN MAHOGANY	LOW CYCLONE RESILIENCE AND HIGH RISK TO PROPERTY AND LIFE
PSIDIUM GUAJAVA	GUAVA	ENVIRONMENTAL WEED
PTEROCARPUS INDICUS PENDULA	WEEPING ROSEWOOD	LOW CYCLONE RESILIENCE AND DISEASE PRONE
SPATHODEA CAMPANULATA	AFRICAN TULIP	LOW CYCLONE RESILIENCE AND ENVIRONMENTAL WEED
WODYETIA BIFURCATA	FOX TAIL PALM	LOW CYCLONE RESILIENCE AND HIGH RISK TO PROPERTY AND LIFE

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16 REPORTS OF REPRESENTATIVES

17 QUESTIONS BY MEMBERS

18 GENERAL BUSINESS

18.1 INCOMING CORRESPONDENCE - DEPUTY PRIME MINISTER - BUILDING BETTER REGIONS FUND (BBRF)

Author: **Governance Business Partner**

Authoriser: **Chief Executive Officer**

Attachments: **1. Incoming Correspondence - Deputy Prime Minister - Building Better Regions Fund (BBRF)** ⇩

RECOMMENDATIONS

That Incoming Correspondence – Deputy Prime Minister – Building Better Regions Fund (BBRF), be RECEIVED AND NOTED.

The Hon Barnaby Joyce MP

Deputy Prime Minister
Minister for Infrastructure, Transport and Regional Development
Leader of The Nationals
Federal Member for New England

Ref: MC21-005802 32

15 SEP 2021

Mr Scott Waters
Chief Executive Officer
City of Darwin
scott.waters@darwin.nt.gov.au

Dear Mr Waters Scott

Thank you for your correspondence of 20 August 2021 offering congratulations on my appointment as Deputy Prime Minister, Minister for Infrastructure, Transport and Regional Development and Leader of the Nationals, and for raising matters related to major infrastructure projects and other economic reforms for the City of Darwin.

It is an incredible honour and privilege to have the opportunity to serve our nation again as Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development. I look forward to continuing to work hard for the people of Australia, particularly our regional communities, to achieve the best possible outcomes for the country.

In returning to the role of Deputy Prime Minister and Minister for Infrastructure, Transport and Regional Development, I have been impressed by the tireless advocacy for regional Australia from local governments. The partnership between the Australian Government, the Northern Territory Government, and the City of Darwin will position Darwin as a vibrant and liveable tropical capital city, supported by a growing population and diversified economy.

The Commonwealth's contribution of $109.1 million to the Darwin City Deal, which was agreed on 16 November 2018, is making transformative investments in the joint vision agreed between the three levels of government. The City deal also supports our ongoing commitment to develop Northern Australia, an agenda that delivers economic and social benefits to make the north a great place to live, work and do business.

As the Chair of the Building Better Regions Fund (BBRF) Round Five Ministerial Panel, I also welcome the City of Darwin's interest in this popular and competitive grant program. Round Five includes up to $100 million of funding dedicated to tourism-related infrastructure projects and a further $100 million to support regional and remote Australia more broadly. I expect the successful projects will be announced within the next two months. I can also advise that preparations for Round Six of BBRF are already underway and it is expected to open for applications towards the end of 2021.

The Hon Barnaby Joyce MP
Parliament House Canberra | (02) 6277 7520 | minister.joyce@infrastructure.gov.au
PO Box 963, Tamworth NSW 2340

The Australian Government's record $110 billion 10-year infrastructure pipeline will support and secure jobs, drive growth and help rebuild Australia's economy from the COVID-19 pandemic. These investments form part of our Economic Recovery Plan and will secure Australia's world-leading economic recovery by delivering nation-building infrastructure projects, meeting our national freight challenge and getting Australians home sooner and safer. I would like to extend my thanks to the City of Darwin for its part in delivering projects under the $2.5 billion Local Roads and Community Infrastructure (LRCI) program.

LRCI Phase 3 will assist our local communities by enabling councils to deliver projects in accordance with local priorities, and will support an estimated 3,500 jobs over the life of the projects, across the nation. Across the three phases of the LRCI Program, the City of Darwin is eligible to receive $5,339,697 in funding. I am pleased to know that seven projects are already approved and underway, including the Lee Point Road upgrade, as well as projects that prioritise road and pedestrian transport safety, such as school crossings, intersection upgrades and pedestrian crossings.

The average unemployment rate in Darwin for the 12 month period to March 2021 was 5.7 per cent, lower than the national average of 6.11 per cent for the same period. This is very good news, and demonstrates we are getting the settings right for a full recovery from the COVID-19 pandemic, from which Darwin should emerge stronger than ever.

Thank you again for writing and for your good wishes. I trust this information is of assistance and I look forward to continuing the productive partnership with the City of Darwin.

Yours sincerely

Barnaby Joyce MP

18.2 INCOMING CORRESPONDENCE - DEPARTMENT OF THE CHIEF MINISTER AND CABINET - CLOSURE OF THE 2019 COMPLIANCE REVIEW

Author: **Chief Executive Officer**

Authoriser: **Chief Executive Officer**

Attachments: **1. Closure of Compliance Review ⇩**

RECOMMENDATIONS

That the report be received and noted.

Further information

City of Darwin was the last Local Government in the Northern Territory to undergo a compliance review against the previous Local Government Act in 2019. The Compliance review was extremely comprehensive and has previously been provided to Council as well as the Risk Management and Audit Committee. Further information is provided to the Risk Management and Audit Committee at this week's Committee meeting. The Review also provided assistance in relation to City of Darwin's compliance with the current Local Government Act. Outstanding items related primarily to adjustments in Travel Policy that have now been finalised. Further delays in completing occurred for varying reasons due to the ongoing pandemic and discussions between Council Officer's and the LG Department. It is pleasing to note that the Compliance Review is now closed with no outstanding compliance matters.

The attached letter of advice was provided on 20th of October and this ordinary meeting is the first opportunity to advise the Council.

NORTHERN TERRITORY GOVERNMENT

Department of
THE CHIEF MINISTER AND CABINET

Level 1, RCG Centre
47 Mitchell Street Darwin NT 0800

Postal address
GPO Box 4396
Darwin NT 0801

E lg.compliance@nt.gov.au

T 08 8999 8868

File reference
HCD2019/06996-2~024

Mr Scott Waters
Chief Executive Officer
City of Darwin
GPO Box 84
DARWIN NT 0801

Dear Mr Waters

Re: CLOSURE OF 2019 COMPLIANCE REVIEW – CITY OF DARWIN

In November 2019, local government inspectors conducted a compliance review on the City of Darwin's (Council) operations under the *Local Government Act 2008*. Upon completion of the review, a compliance review report was provided to the Council detailing areas where action was required.

To ensure your Council was actively addressing the issues identified in the compliance report, local government inspectors conducted a follow-up review on 11 and 12 February 2021 and concluded 11 of the 13 original findings were appropriately addressed by Council, with two issues (Issues 3 and 11) remaining to be addressed. Following an assessment of information received from Council in October 2021, the inspectors were satisfied that the last two compliance review issues were adequately addressed.

I am therefore pleased to advise that local government inspectors are satisfied that the Council has addressed all issues raised in the compliance review report and no further action is required. The compliance review is now officially complete.

I take this opportunity to thank your Council and staff for their cooperation and commitment in ensuring the Council is meeting its legislated requirements.

Please inform Council's elected members of the successful completion of this compliance review.

If you require any further information in relation to this matter, please do not hesitate to contact me on 8999 8868 or email lg.compliance@nt.gov.au.

Yours sincerely

Meeta Ramkumar
Director Sustainability and Compliance
20 October 2021

19 DATE, TIME AND PLACE OF NEXT ORDINARY COUNCIL MEETING

THAT the next Ordinary Meeting of Council be held on Tuesday, 16 November 2021, at 5:30pm (Open Section followed by the Confidential Section), Council Chambers, Level 1, Civic Centre, Harry Chan Avenue, Darwin.

20 CLOSURE OF MEETING TO THE PUBLIC

THAT pursuant to Section 65 (2) of the Local Government Act and Regulation 8 of the Local Government (Administration) Regulations the meeting be closed to the public to consider the Confidential Items of the Agenda.

RECOMMENDATIONS

That Council considers the confidential report(s) listed below in a meeting closed to the public in accordance with Section 65(2) of the Local Government Act:

26.1 City Safe Patrols - July to September 2021

This matter is considered to be confidential under Section 99(2) - 51(c)(iv) of the Local Government Act, and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with information that would, if publicly disclosed, be likely to subject to subregulation 51(3) – prejudice the interests of the council or some other person.

26.2 East Point Sewer Rise Main - Pee Wees Lease Amendment

This matter is considered to be confidential under Section 99(2) - 51(d) of the Local Government Act, and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with information subject to an obligation of confidentiality at law, or in equity.

27.1 Corporate Services Report - August and September 2021

This matter is considered to be confidential under Section 99(2) - 51(a) and 51(c)(iv) of the Local Government Act, and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with information about the employment of a particular individual as a member of the staff or possible member of the staff of the council that could, if publicly disclosed, cause prejudice to the individual and information that would, if publicly disclosed, be likely to subject to subregulation 51(3) – prejudice the interests of the council or some other person.

27.2 YMCA NT Pool Management Report - July to September 2021

This matter is considered to be confidential under Section 99(2) - 51(c)(i) of the Local Government Act, and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with information that would, if publicly disclosed, be likely to cause commercial prejudice to, or confer an unfair commercial advantage on, any person.

27.3 Special Purpose Compliance Review

This matter is considered to be confidential under Section 99(2) - 51(a) and 51(c)(i) of the Local Government Act, and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with information about the employment of a particular individual as a member of the staff or possible member of the staff of the council that could, if publicly disclosed, cause prejudice to the individual and information that would, if publicly disclosed, be likely to cause commercial prejudice to, or confer an unfair commercial advantage on, any person.

27.4 yourDarwin Initiative

This matter is considered to be confidential under Section 99(2) - 51(c)(i) of the Local Government Act, and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with information that would, if publicly disclosed, be likely to cause commercial prejudice to, or confer an unfair commercial advantage on, any person.

21 ADJOURNMENT OF MEETING AND MEDIA LIAISON

MINUTES

Ordinary Council Meeting
Tuesday, 12 October 2021

Reports, recommendations and supporting documentation can be accessed via the City of Darwin Council Website at www.darwin.nt.gov.au, at Council Public Libraries or contact the Committee Administrator on (08) 8930 0670.

MINUTES OF CITY OF DARWIN
ORDINARY COUNCIL MEETING
HELD AT THE COUNCIL CHAMBERS, LEVEL 1, CIVIC CENTRE, HARRY CHAN AVENUE, DARWIN
ON TUESDAY, 12 OCTOBER 2021 AT 5:30PM

PRESENT: Lord Mayor Kon Vatskalis, Alderman Paul Arnold, Alderman Jimmy Bouhoris, Alderman Justine Glover, Alderman Sylvia Klonaris, Alderman Brian O'Gallagher, Alderman Peter Pangquee, Alderman Morgan Rickard, Alderman Vim Sharma, Alderman Ed Smelt, Alderman Amye Un, Alderman Rebecca Want de Rowe

OFFICERS: Scott Waters (Chief Executive Officer), Simone Saunders (Chief Financial Officer), Matt Grassmayr (General Manager Community & Regulatory Services), Emma Young (Acting General Manager Engineering & City Services), Joshua Sattler (General Manager Innovation Growth & Development Services)

Gemma Perkins (Governance Business Partner), Russell Holden (Executive Manager Finance), Angela O'Donnell (Executive Manager Community & Cultural Services), Alice Percy (Executive Manager Growth and Development Services, Katy Moir (Strategic Planning Officer)

APOLOGY: Alderman Mick Palmer

Melissa Reiter (General Manager Government Relations & External Affairs)

GUESTS: Ian Redmond and Gayle Laidlaw (Friends of Lee Point), Roxanne Fitzgerald (ABC), Myles Houlbrook-Walk (ABC), Nathaniel Chambers (NT News)

WEBCASTING DISCLAIMER

The City of Darwin is live webcasting the Open Section of Ordinary Council Meetings. Audio-visual recording equipment has been configured to avoid coverage of the public gallery area and the City of Darwin will use its best endeavours to ensure images in this area are not webcast. However the City of Darwin expressly provides no assurances to this effect and in the event your image is webcast, you will by remaining in the public gallery area be taken to have given the City of Darwin a non-exclusive licence to copy and broadcast your image worldwide for no reward.

Order of Business

1 Acknowledgement of Country

We the members of City of Darwin acknowledge that we are meeting on Larrakia Country.

We recognise and pay our respects to all Larrakia people, Traditional Owners and Custodian Elders of the past and present.

We support emerging Larrakia leaders now and into the future.

We are committed to working together with all Larrakia to care for this land and sea for our shared future.

2 THE LORD'S PRAYER

Our Father, who art in heaven, hallowed be thy name; thy kingdom come; thy will be done; on earth as it is in heaven.

Give us this day our daily bread. And forgive us our trespassess, as we forgive those who trespass against us. And lead us not into temptation; but deliver us from evil.

For thine is the kingdom, the power, and the glory for ever and ever.

Amen.

3 MEETING DECLARED OPEN

RECOMMENDATIONS

The Chair declared the meeting open at 5.31 pm.

4 APOLOGIES AND LEAVE OF ABSENCE

4.1 APOLOGIES

Nil

4.2 LEAVE OF ABSENCE GRANTED

RECOMMENDATIONS

THAT it be noted Alderman Mick Palmer is an apology due to a Leave of Absence previously granted on 28 September 2021 for 12 October 2021 be received and accepted.

4.3 LEAVE OF ABSENCE REQUESTED

Nil

5 ELECTRONIC MEETING ATTENDANCE

5.1 ELECTRONIC MEETING ATTENDANCE GRANTED

Nil

5.2 ELECTRONIC MEETING ATTENDANCE REQUESTED

Nil

6 DECLARATION OF INTEREST OF MEMBERS AND STAFF

6.1 DECLARATION OF INTEREST BY MEMBERS

Nil

6.2 DECLARATION OF INTEREST BY STAFF

Nil

7 CONFIRMATION OF PREVIOUS MINUTES

RESOLUTION ORD416/21

Moved: Alderman Justine Glover
Seconded: Alderman Jimmy Bouhoris

That the minutes of the Ordinary Council Meeting held on 28 September 2021 be confirmed.

CARRIED 12/0

8 MOVING OF ITEMS

8.1 MOVING OF OPEN ITEMS INTO CONFIDENTIAL

Nil

8.2 MOVING OF CONFIDENTIAL ITEMS INTO OPEN

26.1 RISK MANAGEMENT AND AUDIT COMMITTEE - APPOINTMENT OF EXTERNAL COMMUNITY MEMBERS

RESOLUTION ORD423/21

Moved: Lord Mayor Kon Vatskalis
Seconded: Alderman Brian O'Gallagher

1. THAT the report entitled Risk Management and Audit Committee – Appointment of External Community Members, be received and noted.
2. THAT Ninad Sinkar, Sanja Hill and Shane Smith be endorsed as a Community Members of the Risk Management and Audit Committee.
3. THAT Roland Chin be appointed as Chair of the Risk Management and Audit Committee.
4. THAT this report be deemed a confidential document and be treated as such in accordance with Section 118 of the *Local Government Act 2019* and that the document remains confidential unless Council decides otherwise by resolution.
5. THAT should Council endorse the appointment of the Community Members, the Decision be moved into the Open Minutes at the conclusion of the meeting.

CARRIED 12/0

9 MATTERS OF PUBLIC IMPORTANCE / LORD MAYORAL MINUTE

Nil

10 PUBLIC QUESTION TIME

Nil

11 PETITIONS

Nil

12 DEPUTATIONS AND BRIEFINGS

12.1 DEPUTATION – FRIENDS OF LEE POINT

RECOMMENDATIONS

THAT the the presentation from Ian Redmond and Gayle Laidlaw from Friends of Lee Point, in relation to the planning of Lee Point, be received and noted.

13 NOTICES OF MOTION

13.1 NOTICE OF MOTION - SAVE LEE POINT

I, Alderman Rebecca Want de Rowe, give notice that at the next Ordinary Council Meeting on 12 October 2021, I will move the following motion:-

RESOLUTION ORD417/21

Moved: Alderman Rebecca Want de Rowe
Seconded: Alderman Justine Glover

That Council

1. Write to the Minister for Lands, Planning and Environment, calling for the Northern Territory Government to place a moratorium on the current development of Muirhead North and Lee Point subdivision 2CRU until the Northern Territory Planning Commission has developed a comprehensive area plan for Lee Point that reflects the long term wishes and needs of the community.

DIVISION

In Favour: Alderman Paul Arnold, Jimmy Bouhoris, Justine Glover, Sylvia Klonaris, Brian O'Gallagher, Peter Pangquee, Morgan Rickard, Vim Sharma, Ed Smelt, Amye Un and Rebecca Want de Rowe

Against: Lord Mayor Kon Vatskalis

CARRIED 11/1

14 ACTION REPORTS

Alderman Rebecca Want de Rowe departed the meeting at 6:25 pm.

Alderman Justine Glover departed the meeting at 6:25 pm.

Alderman Morgan Rickard departed the meeting at 6:25 pm.

Alderman Justine Glover re-joined the meeting at 6:27 pm.

Alderman Morgan Rickard re-joined the meeting at 6:27 pm.

Alderman Rebecca Want de Rowe re-joined the meeting at 6:27 pm.

14.1 DARWIN CITY CENTRE MASTER PLAN REVIEW 2021

RESOLUTION ORD418/21

Moved: Alderman Jimmy Bouhoris
Seconded: Alderman Peter Pangquee

1. THAT the report entitled 'Darwin City Centre Master Plan Review 2021' be received and noted.
2. THAT Council endorse a review of the Darwin City Centre Master Plan to align with the Central Darwin Area Plan and Darwin 2030 Strategic Plan as part of the deliverables under the city deal agreement.
3. THAT project concepts in the Darwin City Centre Master Plan not yet commenced, be reviewed in terms of feasibility, cost/benefit, relevance to community priorities and any other relevant strategic documents.

4. THAT Council endorse initial investigations to determine the feasibility and appropriateness of a Darwin Municipality Master Plan 2030 and that a further report be brought back to Council outlining the findings, including any recommended 2021/2022 budget allocation to prepare a municipal wide master plan.

CARRIED 12/0

14.2 AUSTIN LANE & SPAIN PLACE ACTIVITY NODE - MOVEABLE SIGNS

RESOLUTION ORD419/21

Moved: Lord Mayor Kon Vatskalis
Seconded: Alderman Paul Arnold

1. THAT the report entitled Austin Lane & Spain Place Activity Node – Moveable Signs be received and noted.
2. THAT Council therefore explore the option of totem signs, electronic signs or other solutions, decline the moveable sign application from Charlie's of Darwin and provide a report to Council at the second Ordinary in November 2021.

CARRIED 12/0

LAY ON TABLE

Moved: Alderman Justine Glover
Seconded: Alderman Rebecca Want de Rowe

THAT item 14.3 lay on the table and be referred until the Minister provides correspondence regarding the Lee Point Development.

CARRIED 7/5

14.3 LEE POINT SUBDIVISION PLACE NAMES APPLICATION

MOTION

1. THAT the report entitled Lee Point Subdivision Place Names Application be received and noted.
2. THAT Council support the four road names for stage one, already approved by the Northern Territory Place Names Committee:
   (a) Road A – Melaleuca Street
   (b) Road B – Cycad Circuit
   (c) Road C – Monsoon Road
   (d) Road D – Teatree Street
3. THAT Council support the proposed five road names for stages six and seven that are yet to be approved by the Northern Territory Place Names Committee:

   Stage six

   (a) Vine Street
   (b) Mangrove Way

   Stage seven

   (a) Rainforest Court
   (b) Canopy Crescent
   (c) Thicket Street
4. THAT Council support the alternative road name, as a substitute for any road names that may not meet the Place Names Committee approval:
   (a) Sanctuary Court

14.4 WALKWAY COMMUNITY CONSULTATION OUTCOME - WALKWAY 187 KAPOOL CRESCENT TO MUELLER ROAD, MALAK

RESOLUTION ORD420/21

Moved: Alderman Sylvia Klonaris
Seconded: Alderman Brian O'Gallagher

1. THAT the report entitled Walkway Community Consultation Outcome – Walkway 187 Kapool Crescent to Mueller Road, Malak be received and noted.
2. THAT Council approve a night-time closure from 9pm to 5:30am of Walkway 187 Kapool Crescent to Mueller Road, Malak.

CARRIED 12/0

14.5 WALKWAY CLOSURE TRIAL OUTCOME - WALKWAY 104 LITCHFIELD COURT TO CRAIG CRESCENT COCONUT GROVE

RESOLUTION ORD421/21

Moved: Alderman Morgan Rickard
Seconded: Alderman Peter Pangquee

1. THAT the report entitled Walkway Trial Closure Outcome – Walkway 104 Litchfield Court to Craig Crescent, Coconut Grove be received and noted.
2. THAT Council approve the ongoing 24/7 closure of Walkway 104 Litchfield Court to Craig Crescent, Coconut Grove.

CARRIED 12/0

Alderman Vim Sharma departed the meeting at 6:53 pm.

Alderman Vim Sharma re-joined the meeting at 6:55 pm.

14.6 CARRY FORWARD BUDGET 2020-2021 AND RESERVE BALANCES AS AT 30 JUNE 2021

RESOLUTION ORD422/21

Moved: Alderman Jimmy Bouhoris
Seconded: Alderman Justine Glover

1. THAT the report entitled Carry Forward Budget 2020-2021 and Reserve Balances as at 30 June 2021 be received and noted.
2. THAT Council resolve to carry forward the items listed in Attachments 1 of report Carry Forward Budget 2020-2021 and Reserve Balances as at 30 June 2021, totalling $9,759,502 by their inclusion in the 2021/22 Municipal Budget.
3. THAT Council resolve to adopt the Reserve Balances total of $80,955,349 listed in Attachment 3 of report Carry Forward Budget 2020-2021 and Reserve Balances as at 30 June 2021.

CARRIED 12/0

14.7 GRANT ACQUITTALS - 2020/21 - DEPARTMENT OF CHIEF MINISTER AND CABINET - LOCAL GOVERNMENT AND REGIONAL DEVELOPMENT

RESOLUTION ORD423/21

Moved: Lord Mayor Kon Vatskalis
Seconded: Alderman Jimmy Bouhoris

1. THAT the report entitled Grant Acquittals 2020/21 – Department of Local Government Regional Development be received and noted.
2. THAT Council endorse the Chief Executive Officer to forward the Grant Acquittal at **Attachment 1** and **Attachment 2** to the report entitled Grant Acquittals 2020/21 – Department of Local Government and Regional Development, to the Department of Local Government and Regional Development
3. THAT Council, pursuant to Section 40 (2) of the *Local Government Act 2019* delegates to the Chief Executive Officer the power to request an extension to the Local Government Priority Infrastructure Fund (LGPIF) – Shoal Bay Waste Management Facility Perimeter Fencing Grant ($322,670) to 15 December 2022.
4. THAT Council, pursuant to Section 40 (2) of the *Local Government Act 2019* delegates to the Chief Executive Officer the power to request that underspent grant funds of $7,130 from the Energy Efficiency and Sustainability Grant (EESG) Program to be redirected to the existing Perimeter Fencing Project at the Shoal Bay Waste Management Facility.

CARRIED 12/0

14.8 LOCAL GOVERNMENT ASSOCIATION OF THE NORTHERN TERRITORY (LGANT) GENERAL MEETING - NOTICE OF MOTION

RESOLUTION ORD424/21

Moved: Lord Mayor Kon Vatskalis
Seconded: Alderman Peter Pangquee

1. THAT Council ENDORSE the following notices of motion to be submitted to the Local Government Association of the Northern Territory (LGANT) General Meeting in November 2021:

   a) THAT LGANT advocate to the Northern Territory Government to establish an independently administered, clear, transparent, and equitable process for all future changes to local government boundaries.

   b) THAT LGANT advocate to the Northern Territory Government to enhance legislative protections to ensure that local government continue to receive rates revenue for properties provided for public housing to ensure continued delivery of essential services and infrastructure to local communities.

   c) THAT LGANT advocate to the incoming Electoral Commissioner for enhanced planning, communication and resources to be made available for future Local Government elections.

CARRIED 12/0

15 RECEIVE & NOTE REPORTS

15.1 DISCOVER DARWIN

RESOLUTION ORD425/21

Moved: Alderman Rebecca Want de Rowe
Seconded: Alderman Jimmy Bouhoris

1. THAT the report Discover Darwin be received and noted.

CARRIED 12/0

15.2 END OF YEAR CAR PARKING REVENUE RESULTS

RESOLUTION ORD426/21

Moved: Alderman Justine Glover
Seconded: Lord Mayor Kon Vatskalis

1. THAT the report End of Year Car Parking Revenue Results be received and noted.

CARRIED 12/0

16 REPORTS OF REPRESENTATIVES

RESOLUTION ORD427/21

Moved: Alderman Ed Smelt
Seconded: Alderman Peter Pangquee

THAT the following Reports of Representatives be received and noted.

16.1

Alderman Ed Smelt reported on the plant giveaway on Saturday morning at Bagot Oval. It was a roaring success. Myself and Alderman Rickard were down there. There was a cue, a couple of hundred people long even before it was due to start. It's extremely popular and I think it would be good to continue it. Staff working very hard and made a number of improvements from the Malak giveaway. I'm not too sure if there is anything else we can do to help the people standing in the sun. If there's any thoughts to how we might be able to get them out faster but it is a great program and I am keen for it to continue.

16.2

Alderman Brian O'Gallagher reported on the Freedom of Entry event. Congratulations to the Lord Mayor and Council. It is a fantastic thing to do and it recognises the value of our military to our society. They make a wonderful contribution, not only are they there in wartime but they are there in peacetime, when we see cyclones and bushfires. I congratulate you and the staff for putting on such a wonderful event.

16.3

Lord Mayor reported on the Freedom of Entry Parade. This is the first time that the RAAF marched since they were granted freedom to the city in 1966. Things have changed. The 30 squadron used to be a reserve squadron but following an emergency it became an active squadron. The interesting thing with 30 Squadron, most of the members that served during the war are buried in Ambon, our Sister City. It was not a very lucky squadron because the airplanes that flew were not state of the art. A lot of them never came back, supported the Defence Forces in East Timor and Ambon. In 1999, they supported East Timor. There were not many people to support East Timor. I remember we used to leave our office at 5.00 o'clock and going to work there until 11.00 o'clock, refuelling and loading airplanes to send them to Timor. It was a great idea, well done. The response of the people, there were so many people in the streets, lining the streets towards the parade. We have defence forces here, I've been to one with the Navy and I've been to one with the army but this was the first one we've done for the RAAF and it was really good.

16.4

Alderman Pangquee reported on the LGANT Executive Meeting on 24 September 2021. Congratulations to LGANT on a successful Elected Member forum. 130 Elected Members, CEO's and General Managers particiated. It was successful. The new ICAC Commissioner came along. His words are very encouraging and the way he wants to handle business in the future. We heard all about the use of pubilc money and financial business planning. We heard about the mandatory training for Elected Members. One of the things at the mock Council that was run by Alan McGill, ex CEO of Darwin Council, was when we ask for a division. In some Councils when they ask for a division they can change their vote. It's in their Meeting Procedures, which we don't do. We take a division as who voted for what. Congratulations to LGANT on a really good forum.

CARRIED 12/0

17 QUESTIONS BY MEMBERS

Alderman Sylvia Klonaris departed the meeting at 7:21 pm.

Alderman Sylvia Klonaris re-joined the meeting at 7:28 pm.

17.1 APPOINTMENT AND OR NOMINATIONS TO DEVELOPMENT CONSENT AUTHORITY

RESOLUTION ORD428/21

Moved: Alderman Justine Glover
Seconded: Alderman Morgan Rickard

Question

Alderman O'Gallagher queried the minutes of the appointment of the representatives or nominations to Development Consent Authority. We took a vote last time, Alderman Palmer and Alderman Panguee were the nominated members with myself as the alternate. I was under the understanding that this was for the next two years however I was confused because when I went back through the briefing papers, behind the papers papers, was a letter from the Minister of Infrastructure to the CEO dated the 2nd of September. I will just quote parts of it and not all of it. The term of the three current community members, Local Government Council nominated Members under the Darwin Division of Development Consent Authority expires on the 3rd of December. The three current members are Alderman Peter Pangquee, Alderman Simon Niblock and Alderman Robin Knox as the alternate member. However in the briefing paper, in the table it lists Alderman Palmer, Alderman Pangquee and Alderman Niblock up to the 21st of August. There is inconsistency there. That was the first part, the second part is in accordance with Section 91(2) of the Planning Act 1999, the number of persons nominated must be at least one greater than a number of vacancies to be filled. Accordingly, this is the minister saying, could you please nominate four persons you think suitable to appoint as community members? So the Minister is asking for four. It then goes on, please note that pursuant to Section 91(3) of the Planning Act 1999, if the Local Government Council fails to nominate the number of persons required, I the Minister, may appoint any person I consider fit. My reading of that is that they are asking for four nominees. It then says, please provide your full nominations and completed registrations forms to myself, Minister Lawler by the 25 October 2021. How do we reconcile that with what we've done, what is the timing or how long are the three nominees that we voted in, what's their period up to? Are we going to do a fourth one at some stage and how do we reconcile?

Answer

The Chief Executive Officer responded and advised that the decision that Council made at the last Ordinary Meeting was to appoint to external committees. We did that in a block, one of which is the Development Consent Authority. Those external committee appointments, as it currently sits is only from 28 September 2021 to 6 December 2021. The decision of the Council was only to appoint for that period of time noting that the current appointees expire on the 3rd of December. Alderman Palmer, Alderman Pangquee and former Alderman Niblock as the three over that period and Alderman O'Gallagher as the alternate member. We will bring a further report to Council to be able to then appoint over those two years. Chief Executive Officer to seek advice from DIPL and we will do what is required. We have this in place prior to the expiry and we will seek advice as soon as possible. Report will be presented to the 2nd Ordinary in November for a re-election of the committees.

CARRIED 12/0

17.2 APPOINTMENT AND OR NOMINATIONS TO DEVELOPMENT CONSENT AUTHORITY CLARIFICATION

RESOLUTION ORD429/21

Moved: Alderman Justine Glover
Seconded: Alderman Morgan Rickard

Question

Alderman Pangquee queried current members on the Development Consent Authority. Currently himself, former Alderman Niblock and former Alderman Knox as the alternate, how did Alderman Palmer get nominated for this period? As the representatives are appointed through the Minister.

Answer

The Chief Executive Officer responded and advised that there was an error in the spreadsheet that was presented to Council and they are the previous appointees. Administrative error in updating. Chief Executive Officer will take advice from the department and the Minister's Office.

CARRIED 12/0

17.3 SAFETY AND TRAFFIC CONCERNS AT WOOLNER ROAD

RESOLUTION ORD430/21

Moved: Alderman Justine Glover
Seconded: Alderman Morgan Rickard

Question

Alderman Arnold requested an update on the safety and traffic concerns at the Woolner roundabout.

Answer

The Acting General Manager Engineering and City Services, Emma Young responded and advised that there was traffic data from 2015 but it up near Stuart Highway. We will conduct further traffic reviews on speed and numbers. In terms of the footpath there is a whole section that doesn't connect up. We can look into completing that as part of our future operational programs.

CARRIED 12/0

17.4 BUFFALO CREEK BOAT RAMP PROGRESS

RESOLUTION ORD431/21

Moved: Alderman Justine Glover
Seconded: Alderman Morgan Rickard

17.4

Question

Alderman Bouhoris queried the Buffalo Creek Boat Ramp progress.

Answer

The Acting General Manager Engineering and City Services, Emma Young responded and advised that they have completed their consultation and awaiting conditions for the go ahead.

CARRIED 12/0

17.5 BOX JELLYFISH SIGNAGE

RESOLUTION ORD432/21

Moved: Alderman Justine Glover
Seconded: Alderman Morgan Rickard

Question

Alderman Glover requested an update on the box jellyfish signage.

Answer

The General Manager Community and Regulatory Services, Matt Grassmayr responded and advised that there will be a report coming to Council, marine signage. To provide an update, Council has secured funding from the Northern Territory Government for production of the signage and they have been ordered. Signs should be up in November but there will be a report to Council.

CARRIED 12/0

17.6 BAGOT PARK MASTER PLAN UPDATE

RESOLUTION ORD433/21

Moved: Alderman Justine Glover
Seconded: Alderman Morgan Rickard

Question

Alderman Smelt requested an update on the Bagot Park Master Plan and where the procurement and planning is up to at the moment.

Answer

The General Manager Community and Regulatory Services, Matt Grassmayr responded and advised that the Bagot Park Master Plan documentation is out to market at the moment. There is currently six or seven people who are going to respond. The closing date for submissions is

Monday 18 October. Following that is the normal procurement process. We are looking to appoint and engage somebody at the beginning of November. Final master plan to return to Elected Members in May 2022.

CARRIED 12/0

17.7 ANIMAL POUND UPGRADE UPDATE

RESOLUTION ORD434/21

Moved: Alderman Justine Glover
Seconded: Alderman Morgan Rickard

Question

Alderman Bouhoris requested an update on the animal pound upgrade.

Answer

The General Manager Community and Regulatory Services, Matt Grassmayr responded and advised that in the previous budget there was $60,000 for animal upgrades. This was primarily through a welfare check from an animal management conference looking at air quality for cat containment. Council has come in under budget and there are now additional funds to look at other measures which is security and fencing. About to commence the constructions work for the cat room, moving on to fencing.

CARRIED 12/0

17.9 TRAFFIC STUDY IN LYONS

RESOLUTION ORD435/21

Moved: Alderman Justine Glover
Seconded: Alderman Morgan Rickard

Question

Alderman Want de Rowe requested a copy of the traffic study done in 2019 on Damabila Drive at the top of Bilingga Street down to Dawarra Crescent.

Answer

The Acting General Manager Engineering and City Services, Emma Young responded and advised that a copy will be provided.

CARRIED 12/0

18 GENERAL BUSINESS

18.1 INCOMING CORRESPONDENCE - CHIEF MINISTER - PROPOSAL TO EXPAND THE CITY OF PALMERSTON BOUNDARY

RESOLUTION ORD436/21

Moved: Alderman Jimmy Bouhoris
Seconded: Alderman Justine Glover

That Incoming Correspondence – Chief Minister - Proposal to Expand the City of Palmerston Boundary be RECEIVED AND NOTED.

CARRIED 12/0

18.2 INCOMING CORRESPONDENCE - AUSTRALIAN LOCAL GOVERNMENT ASSOCIATION (ALGA) - NATIONAL GENERAL ASSEMBLY (NGA) - NOTICE OF MOTION - RECONCILIATION

RESOLUTION ORD437/21

Moved: Alderman Jimmy Bouhoris
Seconded: Alderman Justine Glover

That Incoming Correspondence – Australian Local Government Association (ALGA) – National General Assembly (NGA) - Notice of Motion – Reconciliation be RECEIVED AND NOTED.

CARRIED 12/0

18.3 INCOMING CORRESPONDENCE - MINISTER FOR HOME AFFAIRS - REFUGEES IN DARWIN DETENTION FACILITY

RESOLUTION ORD438/21

Moved: Alderman Jimmy Bouhoris
Seconded: Alderman Justine Glover

That Incoming Correspondence – Minister for Home Affairs – Refugees in Darwin Detention Centre be RECEIVED AND NOTED.

CARRIED 12/0

18.4 INCOMING CORRESPONDENCE - CHAMBER OF COMMERCE NORTHERN TERRITORY - CBD SECURITY SERVICES

RESOLUTION ORD439/21

Moved: Alderman Jimmy Bouhoris
Seconded: Alderman Justine Glover

That Incoming Correspondence – Chamber of Commerce Northern Territory - CBD Security Services, be RECEIVED AND NOTED.

CARRIED 12/0

18.5 LORD MAYOR - PROCESS REGARDING CHANGE OF TITLE OF ALDERMAN TO COUNCILLOR

RESOLUTION ORD440/21

Moved: Lord Mayor Kon Vatskalis
Seconded: Alderman Amye Un

THAT the Chief Executive Officer provide a report to Council detailing the process required to remove the elected member title of Alderman/Aldermen and replace with the title of Councillor/Councillors.

CARRIED 12/0

18.6 LORD MAYOR - TREE ADVISORY COMMITTEE RE-ESTABLISHMENT

RESOLUTION ORD441/21

Moved: Lord Mayor Kon Vatskalis
Seconded: Alderman Jimmy Bouhoris

THAT the Chief Executive Officer provide a report to Council detailing the process required to reactivate the Tree Re-Establishment Advisory Committee as the Tree Advisory Committee and furthermore; That the Council be briefed on options for Elected Member participation, Community members and representative participation as well as the Committee's Responsibilities prior to the report being presented to the Council.

CARRIED 12/0

18.7 BOUGAINVILLEA FESTIVAL

RESOLUTION ORD442/21

Moved: Alderman Justine Glover
Seconded: Lord Mayor Kon Vatskalis

THAT a report be provided to Council on the possibility of a Bougainvillea Festival.

CARRIED 12/0

18.8 CIVIC CENTRE REDEVELOPMENT

RESOLUTION ORD443/21

Moved: Lord Mayor Kon Vatskalis
Seconded: Alderman Brian O'Gallagher

THAT the Chief Executive Officer provide a briefing and/or workshop and report to the first Ordinary Council in November regarding the Civic Centre redevelopment.

CARRIED 12/0

19 DATE, TIME AND PLACE OF NEXT ORDINARY COUNCIL MEETING

RESOLUTION ORD444/21

Moved: Alderman Brian O'Gallagher
Seconded: Alderman Peter Pangquee

THAT the next Ordinary Meeting of Council be held on Tuesday, 26 October 2021, at 5:30pm (Open Section followed by the Confidential Section), Council Chambers, Level 1, Civic Centre, Harry Chan Avenue, Darwin.

CARRIED 12/0

20 CLOSURE OF MEETING TO THE PUBLIC

RECOMMENDATIONS

THAT pursuant to Section 65 (2) of the Local Government Act and Regulation 8 of the Local Government (Administration) Regulations the meeting be closed to the public to consider the Confidential Items of the Agenda.

RECOMMENDATIONS

That Council considers the confidential report(s) listed below in a meeting closed to the public in accordance with Section 65(2) of the Local Government Act:

26.1 Risk Management and Audit Committee - Appointment of External Community Members

This matter is considered to be confidential under Section 99(2) - 51(a) of the Local Government Act, and the Council is satisfied that discussion of this matter in an open meeting would, on balance, be contrary to the public interest as it deals with information about the employment of a particular individual as a member of the staff or possible member of the staff of the council that could, if publicly disclosed, cause prejudice to the individual.

21 Adjournment of Meeting and Media Liaison

The Meeting closed at 7.45pm.

The minutes of this meeting were confirmed at the Ordinary Council Meeting held on 26 October 2021.

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CHAIR