Business Papers

Environment & Infrastructure Committee Meeting

Tuesday, 20 June 2017
5.00pm
Notice of Meeting

To the Lord Mayor and Aldermen

You are invited to attend an Environment & Infrastructure Committee Meeting to be held in Meeting Room 1, Level 1, Civic Centre, Harry Chan Avenue, Darwin, on Tuesday, 20 June 2017, commencing at 5.00pm.

B P DOWD
CHIEF EXECUTIVE OFFICER
CITY OF DARWIN

ENVIRONMENT & INFRASTRUCTURE COMMITTEE MEETING

TUESDAY, 20 JUNE 2017

MEMBERS: Member G A Lambert (Chair); The Right Worshipful, The Lord Mayor, Katrina Fong Lim; Member R K Elix; Member R Want de Rowe; Member E L Young.

OFFICERS: Chief Executive Officer, Mr B Dowd; General Manager Infrastructure, Mr L Cercarelli; Executive Manager, Mr M Blackburn; Manager Technical Services, Mrs N Nilon; Manager Design, Planning & Projects, Mr D Lelekis; Manager Infrastructure Maintenance, Mr K Smith; Manager Capital Works, Mr N Kleine; Executive Assistant, Ms T Zerek.

Enquiries and/or Apologies: Tanya Zerek
E-mail: t.zerek@darwin.nt.gov.au - PH: 89300 581
OR Phone Committee Room 1, for Late Apologies - PH: 89300 519

Committee’s Responsibilities

- Asset Management
- Building Services
- Cemeteries
- Mosquito control
- Operations
- Parks & Reserves
- Pathways
- Road maintenance
- Sporting Areas
- Stormwater Drainage Maintenance
- Street Cleaning
- Urban Forest Management
- Infrastructure Projects
- Infrastructure Maintenance
- Design
- Planning
- Road Construction and Traffic Management
- Urban Enhancement
- Climate Change and Environment
- Waste Management
- Outdoor Dining
- Signage

THAT effective as of 16 April 2012 Council, pursuant to Section 32 (2)(b) of the Local Government Act 2008, hereby delegates to the Environment & Infrastructure Committee the power to make recommendations to Council and decisions relating to Environment & Infrastructure matters within the approved budget.
OPEN SECTION

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Environment & Infrastructure Committee Meeting – Tuesday, 20 June 2017

1. MEETING DECLARED OPEN

2. APOLOGIES AND LEAVE OF ABSENCE
   Common No. 2695036

   2.1 Apologies

   2.2 Leave of Absence Granted

      A. THAT it be noted Member G A Lambert is an apology due to a Leave of Absence previously granted on 16 May 2017 for the period 1 June to 5 July 2017.

      B. THAT it be noted Member R K Elix is an apology due to a Leave of Absence previously granted on 13 June 2017 for the period 16 to 21 June 2017.

3. ELECTRONIC MEETING ATTENDANCE
   Common No. 2221528

   3.1 Electronic Meeting Attendance Granted

4. DECLARATION OF INTEREST OF MEMBERS AND STAFF
   Common No. 2752228

   4.1 Declaration of Interest by Members

   4.2 Declaration of Interest by Staff

5. CONFIDENTIAL ITEMS

   Nil
6. WITHDRAWAL OF ITEMS FOR DISCUSSION

THAT the Committee resolve under delegated authority that all Information Items and Officers Reports to the Environment & Infrastructure Committee Meeting held on Tuesday, 20 June 2017 be received and considered individually.

7. CONFIRMATION OF MINUTES PERTAINING TO THE PREVIOUS ENVIRONMENT & INFRASTRUCTURE COMMITTEE MEETING

THAT the Committee resolve that the minutes of the previous Environment & Infrastructure Committee Meeting held on Tuesday, 23 May 2017, tabled by the Chair, be received and confirmed as a true and correct record of the proceedings of that meeting.

8. BUSINESS ARISING FROM THE MINUTES PERTAINING TO THE PREVIOUS ENVIRONMENT & INFRASTRUCTURE COMMITTEE MEETING

8.1 Business Arising

9. DEPUTATIONS AND BRIEFINGS

Nil
10. OFFICERS REPORTS
| Presenter: | Manager Design, Planning & Projects, Drosso Lelekis |
| Approved: | General Manager Infrastructure, Luccio Cercarelli |

**PURPOSE**

The purpose of this report is to inform Council of an approach by an adjacent land owner to purchase the northern part of Portion 1395 (120A) Reichardt Road, Winnellie and to seek direction on how Council wishes to proceed.

**LINK TO STRATEGIC PLAN**

The issues addressed in this Report are in accordance with the following Goals/Strategies of the City of Darwin 2012 – 2016 as outlined in the ‘Evolving Darwin Towards 2020 Strategic Plan’:-

**Goal**
5 Effective and Responsible Governance

**Outcome**
5.5 Responsible financial and asset management

**Key Strategies**
5.5.1 Manage Council’s business based on a sustainable financial and asset management strategy

**KEY ISSUES**

- The owners of Portion 1396 (122) Reichardt Road, Winnellie have approached Council wishing to purchase the northern part of Portion 1395 (120A) Reichardt Road, Winnellie.
- There is currently an 1800 millimetre diameter Reinforced Concrete Pipe (RCP) running through Portion 1395 (120A) Reichardt Road, Winnellie.
- A valuation report was completed for Portion 1395 (120A) Reichardt Road, Winnellie. The total area is 1,214 square metres at a value of $100/m² giving a total value of $121,400.
- There are no major advantages to Council in selling the land.
RECOMMENDATIONS

THAT it be a recommendation to Council:-

A. THAT Report Number 17TS0021 JW:km entitled Sale of Land - Portion 1395 (120A) Reichardt Road, Winnellie, be received and noted.

B. THAT Council not endorse the sale of part of Portion 1395 (120A) Reichardt Road, Winnellie.

BACKGROUND

Portion 1395 (120A) Reichardt Road, Winnellie runs between Portion 1396, Section 5102, Section 5100 and Section 5095 (Image A) and is currently zoned as General Industry as per the adjoining lots.

Portion 1395 (120A) Reichardt Road, Winnellie currently has an 1800 millimetre diameter Reinforced Concrete Pipe (RCP) running through it, which services the upstream catchment.

The owners of Portion 1396 (122) Reichardt Road, Winnellie, approached Council in late 2016 seeking to purchase the northern part of Portion 1395 (120A) Reichardt Road, Winnellie.
DISCUSSION

Since 2009, the northern part of the lot has been commercially leased allowing for the possession and exclusive use of the land. The leased land was used for equipment storage. The owners requested a surrender of lease mid-2016. The signing and registering of the surrender of lease documents is currently being undertaken. The land is currently fenced off in favour of the proponent.

The owners of Section 5095 (49) Hickman Street, Winnellie currently hold a commercial lease over the southern part of Portion 1395 (120A) Reichardt Road.
which allows for possession and exclusive use of the land and utilise the area of land for storage of equipment.

The owners of Portion 1396 (122) Reichardt Road, Winnellie are seeking to purchase the northern part of Portion 1395 (120A) Reichardt Road, Winnellie to be consolidated with their current lot.

**Stormwater Drainage Implications**

Typically, lots within Winnellie containing stormwater drainage infrastructure also act as the overland flow path in major storm events.

However, in order to preserve City of Darwin's ability to manage the stormwater drainage function of Portion 1395, any sale of the land would require a condition that a drainage easement over the entire area of the lot in favour of City of Darwin be implemented to ensure ongoing access for stormwater maintenance. Downstream of Portion 1395 the stormwater pipe is accommodated by several easements within privately owned lots (shown below).
IMAGE B – EASEMENT PLAN
Positive Aspects of Sale of Land

- Income to Council, and
- Marginally less area to maintain.

Negative Aspects of Sale of Land

- Pipes within the land may need to be replaced in the future and owning the land allows easier and quicker access to the pipes, and
- Ability for Council to utilise the land in the future.

Summary

As the advantages of selling the land do not outweigh the disadvantages, it is recommended that Council not endorse the sale of land.

CONSULTATION PROCESS

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

- Contract Officer
- Manager Business Services
- Team Leader Development
- Manager Capital Works

POLICY IMPLICATIONS

City of Darwin Policy No. 010 - Land Acquisition and Disposal provided guidance in relation to the proposed sale of Council land.

As a general rule, Council (as custodian of public assets) would dispose of all property interests in an open market format to ensure due probity of process and optimal financial return (and minimal risk).

However, Council may undertake an alternative process for the disposal of land where in Council’s opinion, an alternative disposal approach will achieve greater benefits to the ratepayers than could be achieved through a public process and will entertain a direct sale, lease or similar to the exclusion of a public process.

The circumstances which give rise to an alternative process as specified in Policy No. 010 include:

“Where there is only one identifiable purchaser. For example where a site is not large enough for development in its own right and is surrounded by public roads on all sides other than the adjoining owner.”
It is not considered that this case adheres to applying the alternative process as more than one property adjoins the land. Any sale should be conducted in consultation with all adjoining properties and consider all expressions to purchase.

**BUDGET AND RESOURCE IMPLICATIONS**

An initial independent valuation obtained from Valuations NT indicates the value of Portion 1395 (120A) Reichardt Road, Winnellie is $121,400.

If Council elects to sell the land an updated valuation at time of sale should be obtained.

All costs associated with any sale of this land would be borne by the proponents.

**RISK/LEGAL/LEGISLATIVE IMPLICATIONS**

The area of land is a titled lot and would be subject to a contract of sale and transfer of title by the Lands Titles Office.

Any sale of the land would be subject to a public process.

**ENVIRONMENTAL IMPLICATIONS**

Not assessed.

**COUNCIL OFFICER CONFLICT OF INTEREST DECLARATION**

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

DROSSO LELEKIS  
MANAGER DESIGN, PLANNING AND PROJECTS  

LUCCIO CERCARELLI  
GENERAL MANAGER INFRASTRUCTURE

For enquiries, please contact James Whyte on 8930 0413 or email: j.whyte@darwin.nt.gov.au.
ARTIFICIAL GRASS ON COUNCIL LAND

REPORT No.: 17TS0046 JW:lf COMMON No.: 3432793 DATE: 20/06/2017

Presenter: Manager Design, Planning & Projects, Drosso Lelekis
Approved: General Manager Infrastructure, Luccio Cercarelli

PURPOSE

The purpose of this report is to discuss the potential use of artificial grass on Council land and to consider the advantages and disadvantages of its use.

LINK TO STRATEGIC PLAN

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

Goal
2 Vibrant, Flexible and Tropical Lifestyle
Outcome
2.2 A sense of place and community
Key Strategies
2.2.3 Improve the landscaping, streetscape, infrastructure and natural environment

KEY ISSUES

- The use of artificial grass is being requested as an approved treatment of Council owned verge areas.
- There are certain applications that may be suitable for the use of artificial grass.
- There are advantages and disadvantages associated with the use of artificial grass, including environmental and financial.
- This report discusses the potential suitability, and implications of artificial grass in public locations such as verges.
- This report also includes a developer request for the use of artificial grass on the verge of Section 6416 Miles Road, Berrimah.
RECOMMENDATIONS

THAT it be a recommendation to Council:-

A. THAT Report Number 17TS0046 JW:lf entitled Artificial Grass on Council Land, be received and noted.

B. THAT Council consider the use of artificial grass for applications as outlined in Report Number 17TS0046 JW:lf entitled Artificial Grass on Council Land, to be assessed on a case by case basis, to the satisfaction of the General Manager Infrastructure.

C. THAT City of Darwin Policy No. 051 – Verges be updated to reflect Council’s position on the use of artificial grass, to provide better guidance for future developers and residents.

D. THAT Council not allow the use of artificial grass on the verge of Section 6416 Miles Road, Berrimah.

BACKGROUND

At the Ordinary Council Meeting of 29 November 2016, Council resolved as follows:

DECISION NO.21\5065  (29/11/16)

Artificial Grass
Common No. 3432793

That a report be prepared into if it is appropriate to use artificial grass on Council land and if so, in what circumstances and with what applying conditions.

This report discusses the potential use of artificial grass on Council land.

DISCUSSION

Council has received requests from developers over a number of years regarding the use of artificial grass in verge areas. These have been assessed on a case by case basis and those that have been approved, have been for a number of reasons such as being a preferred alternative to concrete (for emergency services access) and for amenity and reduced maintenance in industrial areas.

There are a number of advantages and disadvantages of the use of artificial grass as outlined on the following pages.
Advantages

Water Usage

The use of artificial grass removes or significantly reduces the requirement for watering, dependant on the application of the grass.

Where grass has been used for sports fields, some organisations have used water during hotter periods to reduce the surface temperatures. Where this is necessary, water capture and recycling methods have been developed to reduce the impact on the environment.

As Darwin has a tropical climate and artificial grass has poor heat dissipation (see discussion below), it is not considered practical to have large expanses of artificial grass.

To achieve the advantage of lower water usage in Darwin, the artificial grass would need to be confined to smaller areas so that watering (for heat reduction) is not required.

Maintenance

Natural grass requires the use of pesticides and herbicides and also requires regular mowing. This can result in significant maintenance costs, especially in smaller areas. Artificial turf significantly lowers the cost and frequency of maintenance as mowing and other maintenance is not required.

Aesthetics

Artificial grass maintains its vibrancy year round, positively contributing to the aesthetics of a ‘green’ streetscape. Artificial grass also comes in a huge variety of shades and colours that can be utilised to transform a standard streetscape.

Artificial grass is also more aesthetically pleasing than gravel or concrete when used in verges in areas that would not otherwise be landscaped and maintained (i.e. industrial areas).

Durability

Most artificial grasses are designed to have a life of 10 - 15 years with an 8 – 10 year fade guarantee.

The durability of artificial grass and its use on sports fields has meant that these facilities can be utilised to a much greater degree, not needing to let the field “rest” in between use. The “rest” period that natural grass fields require limits the use of these facilities significantly.
Disadvantages

Increased Stormwater Runoff

The simplest and most cost effective method to lay grass in many applications is to provide a base of cement-stabilised sand. Cement-stabilised sand is nearly impervious and results in increased stormwater runoff flow to stormwater drainage networks. However, Council requires all surfaces to be assumed as impervious for design as the soil acts as an impervious material when it is saturated in large storm events.

Notwithstanding this, there are construction methods for artificial grass that allow for the penetration of stormwater through the surface (Image A). If these methods are used, this is no longer a disadvantage.

Carbon Footprint

The carbon footprint associated with artificial grass is derived from its production and disposal. Most artificial grass is made from raw materials requiring high levels of processing and production, significantly increasing the total emissions of the product in comparison to the emissions resulting from the maintenance of natural grass.

It should be noted that more recycled artificial grass is being manufactured that recycles PET (Polyethylene Terephthalate – Plastic) bottles, helping to reduce landfill but still requires processing and production.

Natural grass removes carbon dioxide from the atmosphere storing it as organic carbon in the soil. Even with the emissions created through maintenance and fertilisation, pesticide and herbicide production, it is considered that natural grass has a positive carbon footprint in comparison to that of artificial grass.
End of Life Disposal

Artificial grass is designed to not break down so once it has reached its useful life it has the potential to stay in landfill for long periods of time.

The reclamation and recycling of artificial grass and the infill, is a growing industry and better methods for the disposal and reuse of the products are being developed. However, as there is not a large amount of artificial grass utilised in the Northern Territory, there are limited options at this time.

Heat Dissipation

Most artificial grass absorbs sunlight, increasing its heat. In hot conditions on a still day, it has been found that artificial grass can be up to 40% hotter than natural grass. This is also dependant on the area of grass as larger areas generate a larger percentage of heat gain.

As Darwin has a tropical climate, this is considered to be a significant issue if not dealt with appropriately. If artificial grass is replacing another form of hardscape, this is no longer considered an issue as there is significant heat gain with other forms of hardscape. The planting of trees can contribute to shading the area also.

Biodiversity and Habitat

Natural grass provides a habitat for a variety of organisms that break down organic and faecal matter that artificial grass cannot support due to its inorganic material. Dependant on the application, this can cause issues with the breakdown of organic matter and as a result, it is not considered suitable in large expanses or where it is replacing natural grass, unless combined with other natural landscaping.

Cleaning

Artificial grass requires cleaning in certain applications (e.g. on verges, sports fields, etc.) The amount of cleaning of artificial grass is based on the location and the activity conducted in the area. Research indicates that the use of artificial grass at a typical home would require watering down with a standard hose approximately once per week.

It should be noted that artificial grass generally cannot support the organisms required to breakdown organic and faecal matter and the only way of removing it is by blower and watering down. This may result in the majority of organic and faecal matter being washed down the stormwater drainage system rather than being broken down naturally.

Potential Uses

With the above advantages and disadvantages taken into account, the following applications of artificial grass are considered suitable.
Tree Bases

Artificial grass could be used at the base of trees in some applications such as:

- As an alternative to porous aggregate, artificial grass can be used at the base of trees planted in the Central Business District and other high pedestrian areas with surrounding hardscape to provide an alternative, vibrant finish (Image B).

![Image B – Artificial Grass Used at Tree Base](image)

- At the base of large shade trees where no grass can grow (Image C). The application of artificial grass would still allow for water penetration, reduce soil erosion and provide a vibrant streetscape.

![Image C – Example of Tree Base](image)

Public Spaces

Small areas in public spaces that have high pedestrian traffic or where it will be difficult to provide irrigation for, could benefit from the use of artificial grass (Image D).
It could also be used to break up areas of hard landscaping that still require the durability associated with traditional surfaces.

Images D – Artificial Grass Used in Public Place

Roundabouts and Medians

Roundabouts and medians often have issues with maintaining vegetation due to accessibility for maintenance and water reticulation (Image E). An alternative may be to provide artificial grass at these locations.

Images E – Artificial Grass Used at Roundabouts and Medians

Uses of Artificial Grass that are not considered viable

Below are some uses that are considered not to be a practical application of artificial grass in the Darwin municipality at this time.

Sports Ovals/Parks

With over 1,000 sports fields in America being artificial grass, it has been well established as an alternative to natural grass in that part of the world. Due to its durability, it allows for a significantly higher use of the sports fields with no “rest” time needed.
 Whilst it has been widely used as an alternative, there is an issue with the heat dissipation in higher temperature environments as the artificial grass can get up to 40% hotter than natural grass. A resolution to this has been to harvest rain water and use it to irrigate the artificial grass, reducing the temperature to a more natural level.

Whilst this is a possibility, there is an enormous capital cost to install a rain harvesting system and the artificial grass, and it is not considered practical or feasible at this time.

**Verges**

As with sports fields, there are many examples where artificial grass has been utilised successfully within verges (*Image F*). Similarly to the sports fields, this is a viable option in many areas, especially in regions that have lower average temperatures, as heat dissipation is not an issue.

![Image F – Artificial Grass Used on Verges](image)

Having large expanses of artificial grass only used on verges is not considered to be practical in the Darwin municipality, due to the heat dissipation issues associated with it and the loss of natural greening.

However, it may be considered viable to use artificial grass in conjunction with natural landscaping (including trees), as the heat dissipation issue will be reduced significantly and some natural greening will still be maintained. The use of artificial grass would also be beneficial to areas that would otherwise require concrete or large areas of gravel, which would only be expected to occur in the City Centre (with full width concrete verges) and heavy industrial areas (with high potential for vehicle trafficking).
Summary

A summary of the information provided in relation to artificial grass is provided below:

<table>
<thead>
<tr>
<th>Advantages</th>
<th>Disadvantages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduced water use</td>
<td>Increased stormwater runoff **</td>
</tr>
<tr>
<td>Reduced ongoing maintenance</td>
<td>Increased carbon footprint</td>
</tr>
<tr>
<td>Improved aesthetics</td>
<td>Poor end of life disposal</td>
</tr>
<tr>
<td>Increased durability</td>
<td>Poor heat dissipation **</td>
</tr>
<tr>
<td>Fireproof</td>
<td>Higher capital cost</td>
</tr>
<tr>
<td>Lower ongoing maintenance cost</td>
<td>Cleaning **</td>
</tr>
</tbody>
</table>

** Only a disadvantage if the artificial grass is replacing natural grass. If it is replacing another form of hardscape, this is not considered a disadvantage.

With the above taken in account, the following are considered to be suitable applications for artificial grass at this time:

- Base of trees surround by hardscape;
- Public spaces as an alternative to pavers or concrete; and
- Roundabouts and medians where irrigation or access isn’t feasible.

It is recommended that Council consider the use of artificial grass in a variety of small scale applications, where it can add value and act as an alternative to other traditional hardscape features. The use of the grass should be determined on a case by case basis depending on the merits of the situation.

It is also recommended that Policy No. 051 be updated to reflect Council’s position on the use of artificial grass, to provide better guidance for future developers and residents.

Request for Artificial Grass – Section 6416 Miles Road, Berrimah

The developer of Berrimah Business Park has retrospectively requested the use of artificial grass on the verge of Section 6416 Miles Road, Berrimah. Their justification has been provided in Attachment A. The artificial grass was laid prior to any request to City of Darwin and was identified by officers at a site inspection for the clearance of the lot development.

In this instance, allowing the use of artificial grass on the verge is not recommended, for the reasons outlined in this report.
CONSULTATION PROCESS

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

- Former Manager for Climate Change and Environment
- Acting Parks Coordinator
- Team Leader Development

POLICY IMPLICATIONS

City of Darwin Policy No. 006 – Environment - General

“City of Darwin has a commitment to reducing water consumption, improving resource recovery and generally to enhance, preserve and protect the Darwin environment.”

City of Darwin Policy No. 051 – Verges

Currently there are no objectives or statements within the policy applying specifically to artificial grass. It should be considered to include this within Policy No. 051 to provide better guidance to residents and developers as to the acceptable uses of artificial grass once a decision is reached from Council.

BUDGET AND RESOURCE IMPLICATIONS

Artificial grass has a higher capital cost than natural grass but less maintenance costs over time.
RISK/LEGAL/LEGISLATIVE IMPLICATIONS

None identified.

ENVIRONMENTAL IMPLICATIONS

These are discussed throughout the body of the report.

COUNCIL OFFICER CONFLICT OF INTEREST DECLARATION

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

DROSSO LELEKIS  
MANAGER DESIGN, PLANNING & PROJECTS

LUCCIO CERCARELLI  
GENERAL MANAGER INFRASTRUCTURE

For enquiries, please contact James Whyte on 8930 0413 or email: j.whyte@darwin.nt.gov.au.

Attachments:

Attachment A: Justification for artificial grass from developer
27 May, 2014
Darwin City Council
Harry Chan Avenue,
Darwin NT 0800

Dear Luccio,

I am writing in regard to seek your approval with the possibility of installing high quality Artificial Grass to the road reserve on a selected number of Blocks in the Berrimah Business Park subdivision. We are installing artificial grass to our boundary on the lots and are hopeful to be able to continue on to the kerb edge. This will give us a very aesthetically pleasing product with our landscaping, providing a first class quality look for the projects all year round.

The blocks for consideration are as follows:
Lot 6401    NT Motorcycle centre (complete
Lot 6402    RSEA
Lot 6441    Darwin Corporate Park

The method of installation is to place 100mm of stabilised sand as a base and then lay and glue the artificial grass over the top. It is an accepted practice with many councils around Australia.
The advantages of Artificial grass are as follows:

No watering – greatly reducing ongoing costs to maintain rather than a natural lawn
No mowing - reduced ongoing maintenance costs - no fuel emissions into the air –no noise pollution from mowers
No need for use of poisons -reduced maintenance costs and better for the environment and general safety
No fertilisers – reduced maintenance costs
No dust or mud – Makes the area usable and safe all year round – no slips or trips in mud or slippery surfaces
No allergies – better health for those that suffer from allergies to natural grasses, seeds, pollens, dust etc
Is not combustible – heat irritants will melt the turf eg: cigarette butt but will not ignite the turf.
Aesthetically pleasing all year round – giving the area a nicer appeal – increasing the visual aspect of the area
Australian Made –supporting Australian jobs
Fully UV stabilised and contains no lead content

Disadvantages of Artificial grass are:

Replacement of grass after repair works from others to the road reserve.

Owners Warranty

In regard to any repair or replacement to artificial grass on the above mentioned blocks, we the owners of the lots warrant that we will be responsible for the rectification of any artificial grass as a result of works done on the road reserve by others..

With such a large project as the Darwin Corporate Park we will be holding artificial grass stock on hand for repairs.
TECHNICAL SPECIFICATION

**ECO TURF 4G GOLD 35**

**COLOUR** Field Green/Olive Green with multicolour subpile

**SUITABLE USAGE** Multipurpose sports fields, landscaping

**SUPPLY**
Available Widths: 3.68 m
Standard Roll Length: As required
Approx Shipping Weight: Varies according to roll length

**OTHER OPTIONS & INFO**
Line systems: Tufted in as required at factory.
Sand characteristics Fine grade silica sand and/or SBR rubber particles

**PRODUCT WARRANTY** 10 year Limited Warranty as per Manufacturer’s Standard Warranty Terms.

**CONFIGURATION**
Pile height: 35 mm
Machine gauge: 7.94 mm (5/16”)
Stitch rate: 19 per 100mm
Yarn weight: 1450 g/m²
Perforated: Yes
YARN PROPERTIES
Construction: Proprietary, IR-reflective COOLplus PE monofilament
Texturized multicolour PP monofilament subpile Linear density: 1050/9450 Tex/Den (+/- 3%) 
UV Stability: The yarn is protected against UV degradation to the highest level as specified 
in the yarn manufacturers warranty terms and conditions.
Environment: Environmentally friendly yarns which are heavy metal free.

PRIMARY BACKING
Construction: Double layer: Polypropylene + Polyester 
Colour: Black

SECONDARY COATING
Compound Base: Hybrid Emulsion 
Tuft Anchorage: 40 newtons (minimum) 
Colour: Black 
Antioxidizing Agent Present

Should you require any additional information please do not hesitate to contact me or Steve Gleeson 
our Projects Manager 
Brett Dixon 
Steve Gleeson

Kind regards
Brett Dixon
PETITION - SPEEDING ALONG UNION TERRACE, ANULA

REPORT No.: 17TS0054 DL:tz COMMON No.: 3303808 DATE: 20/06/2017

Presenter: Manager Design, Planning & Projects, Drosso Lelekis
Approved: General Manager Infrastructure, Luccio Cercarelli

PURPOSE

The purpose of this report is to provide initial comment and information ascertained to date on the issues raised in the petition submitted to Council in relation to speeding along Union Terrace, Anula and the accompanying letter from the Member for Sanderson.

LINK TO STRATEGIC PLAN

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

Goal
2 Vibrant, Flexible and Tropical Lifestyle
Outcome
2.1 Improved access and connectivity
Key Strategies
2.1.3 Manage the road network to meet community needs

KEY ISSUES

• A petition was received at the Ordinary Council Meeting on 16 May 2017 in relation to speeding along Union Terrace, Anula and referred to the Environment and Infrastructure Committee.
• The issues raised in that petition were speeding along Union Terrace and its intersections with Matthews and Lee Point Roads and accidents at these intersections.
• The covering letter from the Member for Sanderson presenting the petition provides further detail of concern raised by residents in the area and raises further concern about speeding along other roads in the area, including Wulagi Terrace and Matthews Road.
• Traffic counts have been undertaken to ascertain the speeds travelled along these roads and available accident data was collated.
• The deployment of speed check signs is programmed along these roads in the coming months as an educational measure for motorists.
• A request has been made to the Northern Territory Police (the authority responsible for the regulation of speeding motorists) for regular speed enforcement along the roads in the area.
• It is recommended that the sections of road and intersections with accident histories, and the school zone, are included for investigation and prioritisation of any upgrading works for inclusion in future works programs.

RECOMMENDATIONS

THAT it be a recommendation to Council:-

A. THAT Report Number 17TS0054 DL:tz entitled Petition - Speeding Along Union Terrace, Anula, be received and noted.

B. THAT Council refer an appropriate treatment to address the Lee Point Road/Union Terrace intersection to the 2018/2019 Budget process.

C. THAT an investigation into possible traffic calming measures that may be employed to reduce speeds within the school zones along Wulagi Crescent and Matthews Road be undertaken and that any upgrading works identified be prioritised against any similar projects for consideration in the 2018/2019, and future, Budget processes.

D. THAT the sections of road and intersections with accident histories as identified in Report Number 17TS0054 DL:tz entitled Petition - Speeding Along Union Terrace, Anula be included on Council’s list of sites for investigation and prioritisation of any upgrading works deemed necessary.

BACKGROUND

At the 1st Ordinary Council Meeting of 16 May 2017, Council resolved as follows:

DECISION NO.21\5361  (16/05/17)

Petition - Speeding Along Union Terrace, Anula
Document No. 3519645 (12/04/17) Common No. 3303808

A. THAT the Petition in relation to speeding along Union Terrace, Anula be received and noted.

B. THAT the Petition in relation to speeding along Union Terrace, Anula be referred to the Environment & Infrastructure Committee.

This report provides initial comment and information ascertained to date on the issues raised in the petition and the accompanying letter from the Member for Sanderson.
DISCUSSION

The Member for Sanderson wrote to Council requesting the tabling of a petition in relation to speeding along Union Terrace in April 2017 (Attachment A). This petition was presented to Council at the Ordinary Council Meeting of 16 May 2017 and it was resolved that it be referred to the Environment and Infrastructure Committee. This covering letter provided further detail of concern raised by residents in the area and raises further concern about speeding along other roads in the area, including Wulagi Terrace and Matthews Road.

The issues raised in that petition itself are speeding along Union Terrace and its intersections with Matthews and Lee Point Roads and accidents at these intersections.

The main areas of concern raised in the above mentioned correspondence from the Member for Sanderson are:

- Speeding around the corner at the Union Terrace/Matthews Road intersection;
- Speeding, “burn outs and hooning” at the Union Terrace/Yanyula Drive and Union Terrace/Wulagi Terrace intersections;
- Speeding and safety concerns along the bend along Union Terrace;
- Accidents at the Union Terrace/Lee Point Road intersection; and
- General speeding along Union Terrace, Wulagi Terrace and Matthews Road.

An initial investigation has been undertaken into the issues raised in both the petition itself and the additional matters raised by the Member for Sanderson. This includes traffic counts along Union Terrace, Wulagi Terrace and Matthews Road to measure the speeds at which motorists are travelling along these roads and ascertaining accident information along these roads and their intersection from available official accident data supplied by the Northern Territory Government. The traffic counts along Union Terrace were undertaken in April 2017 and the counts along Wulagi Terrace and Matthews Road were undertaken in June 2017.

Speed Assessment

A summary of the data extracted from the traffic counts is provided in the following sections, separated by road.
Union Terrace

The posted speed limit along Union Terrace is 60 km/hr.

<table>
<thead>
<tr>
<th>Location</th>
<th>Ave. Daily Vol.</th>
<th>Average Daily Volume per Speed Range (km/h)</th>
<th>*85th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 Union Tce</td>
<td>3813</td>
<td>963 (25.2%) 1995 (52.3%) 799 (20.9%) 52 (1.4%) 3 (0.1%) 1 (0.03%) 0</td>
<td>52.2</td>
</tr>
<tr>
<td>23 Union Tce</td>
<td>3325</td>
<td>105 (3.2%) 479 (14.4%) 1690 (50.8%) 898 (27.0%) 130 (3.9%) 17 (0.5%) 6</td>
<td>64.4</td>
</tr>
<tr>
<td>61 Union Tce</td>
<td>1594</td>
<td>51 (3.2%) 195 (12.2%) 809 (50.8%) 459 (28.8%) 65 (4.1%) 10 (0.6%) 5</td>
<td>64.8</td>
</tr>
<tr>
<td>76 Union Tce</td>
<td>1832</td>
<td>588 (32.1%) 1118 (61.0%) 122 (6.7%) 4 (0.2%) 0 (0.0%) 0 (0.0%)</td>
<td>47.5</td>
</tr>
</tbody>
</table>

Along Union Terrace, the results of the traffic counts undertaken show that a maximum of 34% of vehicles travel over 60 km/hr, with only a very small proportion (under 5%) of vehicles travelling at speeds of over 70 km/hr.

At the location with the highest 85th percentile speed (outside 61 Union Terrace), of the vehicles that travel over the posted speed limit of 60 km/hr, 2.1% were motorbikes, 79.8% were cars (and other similar classification vehicles) and 18.1% were trucks (or vehicles with trailers).

The maximum speed of 129.9 km/hr was measured at 1.13 pm on 10 April 2017 and this vehicle was a car, with a trailer. The next highest speed was 129.5 km/hr, measured at 4.20 am on 16 April 2017 and this vehicle was a motorbike.

Wulagi Crescent

The default speed limit along Wulagi Crescent is 50 km/hr. There is a school zone along Wulagi Crescent with a speed limit of 40 km/hr between 7.00 am and 5.00 pm.

<table>
<thead>
<tr>
<th>Location</th>
<th>Ave. Daily Vol.</th>
<th>Average Daily Volume per Speed Range (km/h)</th>
<th>*85th Percentile</th>
</tr>
</thead>
<tbody>
<tr>
<td>36 Wulagi Cres (school hours)</td>
<td>806</td>
<td>271 (33.7%) 379 (47.1%) 128 (15.9%) 24 (2.9%) 3 (0.4%) 1 (0.1%) 0</td>
<td>53.6</td>
</tr>
<tr>
<td>36 Wulagi Cres (after hours)</td>
<td>910</td>
<td>98 (10.8%) 367 (40.3%) 357 (39.2%) 75 (8.3%) 10 (1.1%) 2 (0.2%) 1 (0.1%)</td>
<td>57.6</td>
</tr>
<tr>
<td>76 Wulagi Cres</td>
<td>834</td>
<td>83 (9.9%) 256 (30.7%) 356 (42.7%) 116 (13.9%) 20 (2.4%) 2 (0.3%) 1 (0.08%)</td>
<td>60.5</td>
</tr>
</tbody>
</table>

Along Wulagi Terrace, in the school zone, 66% of vehicles travel above 40 km/hr within school zone hours. Outside of school hours, 49% of vehicles travel above 50 km/hr. Outside of the school zone, 59% of vehicles travel above 50 km/hr with only 17% of vehicles travelling at speeds of over 60 km/hr.
Within the school zone, of the vehicles that travel over the posted speed limit of 40 km/hr, 2.4% were motorbikes, 75.9% were cars (or similar) and 21.6% were trucks (or cars with trailers). Outside of the school zone, of the vehicles that travel over the default speed limit of 50 km/hr (at location with the highest 85th percentile speed - outside 76 Wulagi Crescent), 1.1% were motorbikes, 76.3% were cars (or similar) and 22.6% were trucks (or vehicles with trailers).

The maximum speed within the school zone was 80.3 km/hr and was measured at 1.15 pm on 9 June 2017. This vehicle was a motorbike. The maximum speed outside the school zone was 120 km/hr and was measured at 10.23 pm on 11 June 2017. This vehicle was a motorbike.

Matthews Road

The posted speed limit along Matthews Road is 60 km/hr. There is a school zone along Matthews Road with a speed limit of 40 km/hr between 7.00 am and 5.00 pm.

<table>
<thead>
<tr>
<th>Location</th>
<th>Ave. Daily Vol.</th>
<th>Average Daily Volume per Speed Range (km/h)</th>
<th>*85th Perce ntile</th>
</tr>
</thead>
<tbody>
<tr>
<td>14 Matthews Rd</td>
<td>3251</td>
<td>84 (2.6%)</td>
<td>65.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>347 (10.7%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1592 (49.0%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1068 (32.9%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>141 (4.3%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 (0.5%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 (0.09%)</td>
<td></td>
</tr>
<tr>
<td>49 Matthews Rd (school hours)</td>
<td>1129</td>
<td>770 (68.3%)</td>
<td>45.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>295 (26.2%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>52 (4.6%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>10 (0.9%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (0.1%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (0.1%)</td>
<td></td>
</tr>
<tr>
<td>49 Matthews Rd (after hours)</td>
<td>955</td>
<td>544 (57.1%)</td>
<td>49.7</td>
</tr>
<tr>
<td></td>
<td></td>
<td>273 (28.6%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>99 (10.4%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>32 (3.3%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 (0.6%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (0.1%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (0.1%)</td>
<td></td>
</tr>
<tr>
<td>89 Matthews Rd (school hours)</td>
<td>517</td>
<td>154 (29.9%)</td>
<td>58.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td>223 (43.2%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>104 (20.2%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>30 (5.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 (0.9%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (0.0%)</td>
<td></td>
</tr>
<tr>
<td>89 Matthews Rd (after hours)</td>
<td>436</td>
<td>39 (8.9%)</td>
<td>63.4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>90 (20.7%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>191 (43.8%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>93 (21.3%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>19 (4.4%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 (0.7%)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 (0.2%)</td>
<td></td>
</tr>
</tbody>
</table>

Along Matthews Road, in the school zone, a maximum of 70% of vehicles travel above 40 km/hr within school zone hours. Outside of school hours, a maximum of 27% of vehicles travel above 60 km/hr. Outside of the school zone, 38% of vehicles travel above 60 km/hr with only 5% of vehicles travelling at speeds of over 70 km/hr.

Within the school zone at the site of the highest 85th percentile speed (outside 89 Matthews Road), of the vehicles that travel over the posted speed limit of 40 km/hr, 1.3% are motorbikes, 79.6% are cars (or similar) and 19.1% are trucks (or vehicles with trailers). Outside of the school zone, of the vehicles that travel over the posted speed limit of 60 km/hr, 1.6% were motorbikes, 77.6% were cars (or similar) and 20.8% were trucks (or vehicles with trailers).

The maximum speed within the school zone was 88.8 km/hr, was measured at 3.08 pm on 9 June 2017 and this vehicle was a motorbike. The maximum speed outside the school zone was 123.6 km/hr and was measured at 1.38 am on 8 June 2017. This vehicle was a motorbike.
*The 85th percentile speed is the speed at which 85% of motorists are travelling at or below and is the key criterion by which road speed limits are set.

**Summary – Speed Assessment**

Although the measured 85th percentile speeds are over the posted or default speed limits for these roads, outside of the school zones, the percentage of vehicles travelling at excessive speeds (e.g. over 70 km/hr) are relatively low. It is considered that a combination of the deployment of speed check signs (education) and more regular speed enforcement by the Northern Territory Police are the appropriate actions in order to address these concerns in these areas.

The Member for Sanderson states that she has already requested that regular speed enforcement along the roads in the area be undertaken by the Northern Territory Police. Union Terrace, Wulagi Terrace and Matthews Road have been included in Council’s speed check sign program for June, August and September respectively as part of its ongoing efforts to educate the driving public about the speeds they actually travel on its road network.

The measured 85 percentile speeds within the school zones are of greater concern and although they can be dealt with through the educational measure of speed check signs and enforcement measure of more regular policing in the short-term, it is considered that an investigation into the implementation of other measures that may have a longer-term effect (e.g. local area traffic management) should be undertaken in regard to these areas.

It is also recommended that an investigation into possible traffic calming measures that may be employed to reduce speeds within the school zones along Wulagi Crescent and Matthews Road be undertaken and that any upgrading works identified be prioritised against other roads and school zones for inclusion in future local area traffic management programs.

**Recorded Accidents Assessment**

The summary of the accidents recorded between 1 January 2012 and 30 August 2016 along each road and its intersections is provided below. This is the latest accident record available at the time of writing this report.
<table>
<thead>
<tr>
<th>Location</th>
<th>Total Crashes</th>
<th>Casualty Crashes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Union Terrace (midblock)</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Union Terrace &amp; Lee Point Road Intersection</td>
<td>15</td>
<td>3</td>
</tr>
<tr>
<td>Union Terrace &amp; Copperfield Crescent Intersection</td>
<td>3</td>
<td>1</td>
</tr>
<tr>
<td>Union Terrace &amp; Yanyula Drive Intersection</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Wulagi Crescent (midblock)</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>Wulagi Crescent &amp; Patterson Street Intersection</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>Matthews Road (midblock)</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Matthews Road &amp; Patterson Street Intersection</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Matthews Road &amp; McMillans Road Service Road Intersection</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

The number of total recorded crashes at all of the road sections and intersections above, except for the Lee Point Road/Union Terrace intersection, are relatively low and not dissimilar to many other intersections within the Darwin Municipality.

Given the accident history of the Lee Point Road/Union Terrace intersection and other intersections of Lee Point Road between McMillans Road, Council made a previous submission to the 2017/2018 Black Spot Programme for funding for a Lee Point Road Study. This application was unsuccessful.

It is recommended that Council refer an appropriate treatment to address the accident record at the Lee Point Road/Union Terrace intersection to the 2018/2019 Budget process. External funding opportunities and partnerships (such as Black Spot) will continue to be pursued for the funding of this and other traffic management projects.

It is also recommended that the sections of road and intersections with accident histories as identified in this report be included on Council’s list of sites for investigation and prioritisation of any upgrading works deemed necessary for inclusion in future local area traffic management programs.

Council does not support the use of permanent signage at the entry points to roads advising of road speed limits and advising motorists to be conscious that they are driving through a residential area, as experience has shown that this measure is not conducive to reducing speeds beyond the short term.
CONSULTATION PROCESS

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

- Acting Team Leader Design
- Manager Technical Services
- Manager Capital Works

The implementation of any traffic calming measures along the roads, including their intersections, discussed in this report would be subject to community consultation.

POLICY IMPLICATIONS

City of Darwin Policy No. 025 - Community Consultation.

BUDGET AND RESOURCE IMPLICATIONS

Council has an annual budget for local area traffic management within its Municipal Plan.

Council actively seeks external funding opportunities for the upgrading of its road network. External funding opportunities and partnerships (such as Black Spot) will continue to be pursued for the funding of this and other traffic management projects.

The appropriate treatment for the intersection of Lee Point Road and Union Terrace will be referred to in the 2018/2019 Budget process.

RISK/LEGAL/LEGISLATIVE IMPLICATIONS

Motorists have a legal obligation to drive at the road speed limit.

The enforcement of road speed limits is the responsibility of the Northern Territory Police.

ENVIRONMENTAL IMPLICATIONS

Council aims to provide a safe road network environment for all road users.

In order to facilitate adherence to road speed limits and a safer road environment, adequate enforcement, education and perhaps even physical changes to the road (if deemed necessary) or a combination of these three treatments may be considered. As the cost of implementing physical road changes is typically expensive, careful consideration is required to ascertain whether there is both an actual need to take this extra step and that these changes will result in a significant improvement, without creating other issues such as restrictions to property access, before this course of action is taken.
COUNCIL OFFICER CONFLICT OF INTEREST DECLARATION

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

DROSSO LELEKIS  
MANAGER DESIGN, PLANNING & PROJECTS

LUCCIO CERCARELLI  
GENERAL MANAGER INFRASTRUCTURE

For enquiries, please contact Drosso Lelekis on 8930 0414 or email: d.lelekis@darwin.nt.gov.au.

Attachments:

Attachment A: Incoming letter from Member Kate Worden - Petition – Speeding Issues on Union Terrace and Covering Letter
Ms Justine Glover
Alderman – Waters Ward
City of Darwin
PO Box 84
DARWIN NT 0801

Dear Ms Glover,

I am writing to request your assistance in presenting the attached petition regarding speeding along Union Terrace in Anula to the City of Darwin Council. I would also like to gain your support and advocacy for the development of a broader ‘traffic calming plan’ for Union Terrace, Wulagi Terrace and Matthews Road.

As you are aware, I have been approached by several residents of Union Terrace to take up this issue as they feel that Council has ignored their individual representations. Please find attached a petition with the names of 277 local residents who wish the Council to address this issue.

We know that Union Terrace is a distributor road and therefore is rightly signed 60km per hour. There is no argument about the signed speed or the function of the road. However, it is clear that motorists are ignoring the speed limit and the seemingly wide nature of the road contributes to this behaviour.

I acknowledge that the regulation and management of speeding motorists is within the purview of the Northern Territory Police. However, their efforts can be supported by the installation of traffic calming mechanisms such as marked car bay areas, traffic islands and other contemporary treatments. For your information, I have requested that the Police conduct regular speed enforcement exercises in the area and this will commence shortly.

On Union Terrace, there are five main areas of concern:

(1) Intersection of Union Terrace and Matthews Road - motorists often speed around this corner from both directions and have previously hit cars legally parked along the side of the road. There is also a bus stop located close to the corner and this has the potential to cause a far worse accident should a pedestrian cross at same time.

(2) & (3) Intersections of Yanyula Drive and Wulagi Terrace - there is a lot of physical and verbal evidence of ‘burn outs’ and hooning at each intersection and residents regularly complain of cars speeding around into Union almost nightly.
(4) The bend - I have pictures of damage to a fence and have seen first-hand residents of Union Terrace attempt to reverse from their driveways on the bend only to encounter a speeding vehicle and narrowly avoid a serious accident.

(5) Intersection of Union Terrace and Lee Point Road – with the increased traffic along Lee Point road due to the development of Lyons and Muirhead, there have now been some serious accidents at this intersection (I understand that this may be addressed through the redevelopment of the older section Lee Point Road in the not too distant future).

I would like to take this opportunity to highlight similar issues along Wulagi Terrace and Matthews Road which both form part of the main thoroughfare from Lee Point Road through the suburbs of Wulagi and Anula. These issues have become increasingly apparent since January this year whilst we have been collecting support for the attached petition.

I appreciate that Council will be installing ‘speed check’ signs along all of these three roads in July, August and September but we know that this does not have a long term effect on driver behaviour so I am requesting consideration of a broader traffic calming plan for all three roads.

In addition, I am again formally requesting that Council consider the installation of permanent ‘speed check’ signage at the entry points for all 60km distributor roads across the Northern Suburbs of Darwin that advise motorists that they are driving through a residential area and to be considerate of local residents in their driving habits. Such a sign has been successfully in place in Parap on Gregory Street for many years and together with traffic calming installations has had a positive effect on the amenity of local residents in that area.

I would appreciate you tabling the petition at the next possible Council meeting.

I would also appreciate an opportunity to meet with you as our most active local council representative and any relevant council staff to discuss how such a plan can be devised and implemented. I can be contacted via my Electorate Office on 8999 6781 or via email on electorate.sanderson@nt.gov.au.

I look forward to working with you on this very worthwhile project and delivering some positive outcomes for the residents of Wulagi and Anula.

Kind Regards

Kate Worden
Member for Sanderson

12 April 2017
SPEEDING ISSUES ON UNION TERRACE

Union Terrace is a 60km distributor road through the suburbs of Anula and Wulagi. Due to its wide and uninterrupted straight nature, it makes drivers feel confident to speed even though this is a heavily residential suburban area. The residents living along Union Terrace and adjacent roads are tired of speeding traffic particularly at the intersections with Matthews and Lee Point Roads where there have been several accidents. Whilst we understand that Union Terrace has a specific function to distribute traffic into the adjacent suburbs, we also believe that it is time to put some appropriate measures into place that ensure drivers keep to the signed speed limit.

We the undersigned wish for the City of Darwin Council to consider re-engineering the road and put in place traffic calming treatments that remind drivers to not exceed the speed limit in such a heavily residential area.
PURPOSE

The purpose of this report is to advise Council of a request from the Northern Territory Government (NTG) for comment on a proposal to upgrade the entrance to the Palmerston Cemetery on Goyder Road Parap.

LINK TO STRATEGIC PLAN

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

Goal
1. Collaborative, Inclusive and Connected Community
Outcome
1.2 Desirable places and open spaces for people
Key Strategies
1.2.1 Enhance places and open spaces

KEY ISSUES

- The Heritage Branch of the NTG’s Department of Tourism and Culture has written to council requesting comment on a proposal to upgrade the entrance to the Palmerston Cemetery.
- The proposed upgrade includes two design options.
- The Cemetery is owned by NTG and maintained by Council.
- City of Darwin officers consider option 1 to be the preferred option.
RECOMMENDATIONS

THAT it be a recommendation to Council:-

A. THAT Report Number 17TS0058 KS:jh entitled Palmerston Cemetery Upgrade Proposal, be received and noted.

B. THAT Council provides in principle support for Option 1 of the proposal in Report Number 17TS0058 KS:jh entitled Palmerston Cemetery Upgrade Proposal, to upgrade the entrance to the Palmerston Cemetery.

C. THAT Council writes to the Department of Tourism and Culture’s Heritage Branch advising of the in principle support for the Palmerston Cemetery Upgrade.

BACKGROUND

The Palmerston Cemetery is situated on Goyder Road and is also known as the Goyder Road Cemetery or Pioneer Cemetery. It was opened in 1865 and closed in 1919 and has been managed by City of Darwin since 1958.

The Cemetery was declared a heritage place on 7 May 1997.

DISCUSSION

The Department of Tourism and Culture’s Heritage Branch has written to City of Darwin seeking comment on a proposal to upgrade the entrance to the Palmerston Cemetery Attachment A.

Although the cemetery land is vested in the NTG, City of Darwin maintains the cemetery and has an interest in the upgrading proposal from both an amenity and maintenance perspective.

The entrance to this important, historic and culturally sensitive location is considered by the Heritage Branch to be in poor condition with the existing interpretive shelter and story boards being aged and outdated.

The proposed upgrade includes two design options represented through an artist’s concept drawings provided at Attachment A.

The proposed concepts include:

Option 1

- A new entrance gate and concrete portal set within the existing fence;
- A commemorative wall comprising four concrete panels;
The centre two panels to include a map of the cemetery and index to the approximately 90 visible grave plots;  
- Remaining two walls to include a record of the names of other people known to be buried in the cemetery;  
- A concrete seat opposite the walls;  
- A symbolic path running in front of the commemorative wall;  
- A small steel frame covering roof, providing sun and rain protection for the walls and seating; and  
- Materials to be used are unpainted concrete with galvanised or rust paint and steel work with a corrugated iron roof.

**Option 2**

- A new entrance gate and concrete portal set within the existing fence;  
- Concrete wall panels either side of the gateway;  
- A commemorative wall of framed steelwork to include a map of the cemetery and index to the approximately 90 visible grave plots;  
- A concrete seat opposite the commemorative wall;  
- A symbolic path running in front of the commemorative wall;  
- A small steel frame covering roof, providing sun and rain protection for the walls and seating; and  
- Materials to be used are unpainted concrete with galvanised or rust paint and steel work with a corrugated iron roof.

City of Darwin officers recommend endorsing the proposed upgrade to increase the visitor experience at the historic site.

Officers have assessed the proposal in relation to its operational and maintenance impacts. The maintenance impact to Council is considered negligible.

Further details regarding the proposal that need to be resolved are:

- Is the NTG proposing any change to the maintenance responsibilities of the entrance, or the cemetery, other than the status quo? and  
- Is the proposal fully funded by the NTG?

Comments on the proposal that staff recommend be included with the response to the Heritage Branch include the following:

- Council considers Option 1 to be the preferred option due its architectural link with the past and the additional display space that would be available.  
- The materials proposed, steel and concrete are suitable for the purpose but may lack an opportunity to add to the amenity of the entry statement through the introduction of colour or feature elements.  
- Roofing could be reconsidered to provide sun protection but without full rain protection to avoid antisocial behaviour.
Darwin Genealogical Society has completed extensive research into the number of graves and identities of those interred into the cemetery. This group should be consulted with, by Heritage Branch, if not already done so to gain assistance with general information and names of those interred.

- An anti-graffiti coating should be applied to all surfaces.
- The entry gate has previously included a closing/locking mechanism which is thought to have provided a level of security for the cemetery. A lockable gate to deter people from entering the cemetery out of standard operating hours should be considered.
- Pathway connection to the existing footpath on surrounding streets should be considered to improve accessibility.
- Details or concepts on information displays intended would be helpful to fully understand the project.
- A whole of life maintenance plan be developed, by NTG, to ensure certainty on maintenance responsibilities and to provide certainty on what will happen with the structure at substantial time frames within its useful life.

Summary

It is considered that given the significance of this site and the current poor condition of the entrance to the cemetery the proposal should be supported.

CONSULTATION PROCESS

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

- Senior Administration Officer.

POLICY IMPLICATIONS

Nil assessed

BUDGET AND RESOURCE IMPLICATIONS

A negligible increase in maintenance cost is expected and can be accommodated within existing maintenance budgets.

RISK/LEGAL/LEGISLATIVE IMPLICATIONS

Nil assessed
ENVIRONMENTAL IMPLICATIONS

Nil assessed

COUNCIL OFFICER CONFLICT OF INTEREST DECLARATION

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

KERRY SMITH
MANAGER INFRASTRUCTURE MAINTENANCE

LUCCIO CERCARELLI
GENERAL MANAGER INFRASTRUCTURE

For enquiries, please contact Kerry Smith on 8930 3654 or email: k.smith@darwin.nt.gov.au.

Attachments:

Attachment A: Request for comment on proposed interpretive shelter at Palmerston Cemetery.
Mr Luccio Cercarelli  
General Manager Infrastructure  
City of Darwin  
GPO Box 84  
DARWIN NT 0801

Dear Mr Cercarelli

Re: Palmerston Cemetery

The historic Palmerston Cemetery, located at Goyder Road, was declared a heritage place on 7 May 1997 and represents the last resting place of pioneers whose contribution collectively is important to the interpretation of the Territory’s and Darwin’s historical, social and cultural background.

The entrance to the cemetery is in poor condition with the interpretive shelter and story boards being aged and outdated. The Department of Tourism and Culture, in consultation with interested parties, propose to upgrade the entrance to the cemetery.

Two concept designs for a small interpretative shelter that will house the existing cast bronze plaque and a new cemetery directory have been developed to reflect the importance of the site as Darwin’s first official cemetery.

As the City of Darwin maintains the cemetery we would appreciate Council’s comments regarding the proposal. I have attached copies of an artist perspective and design drawings of the concepts for Council’s information.

Yours sincerely

Michael Wells  
Director  
Heritage Branch

17 May 2017

CC Kerry Smith  
Superintendent of Cemeteries
PALMERSTON CEMETERY
PROPOSED INTERPRETATIVE SHELTER
BACKGROUND

The Palmerston Cemetery, located in the heart of the city, was established in the early 1800s. The site is significant for its history and the remains of many significant figures. The cemetery is managed by the Northern Territory government, and recent efforts have been made to preserve and enhance its historical value.

CONCEPT

The proposed interpretative shelter is designed to provide a welcoming and informative space for visitors. The shelter will be integrated into the landscape and will complement the existing infrastructure of the cemetery. The design is sensitive to the historical and cultural context of the site.

DESCRIPTION

The concept for the interpretative shelter involves the creation of a sheltered pedestrian pathway that will guide visitors through the cemetery. The pathway will be supported by concrete columns and will be lined with benches for seating.

MATERIALS

The materials used will be selected to complement the existing landscape and to ensure durability. Natural stone and timber will be used for the pathway, while the shelter will be constructed using weather-resistant materials.

PALMERSTON CEMETERY

PROPOSED INTERPRETATIVE SHELTER
PALMERSTON CEMETERY
PROPOSED INTERPRETATIVE SHELTER
BACKGROUND

OPPOSING THE PALMERSTON CEMETERY IS PERFORMED TO THE SOUTH ON THE CENTRALISED MEMORIAL TCL THE SITE IS NOW DORMANT, A HUMAN ACTIVITY THAT PROPELS CEMETERY LIFE CONTEMPLATING THE CEMETERY TODAY.

THE NORTHERN METROLOGY REGION PLAN RECOMMENDED THE CONSTRUCTION OF A NEW BURIAL FOR THE INHABITED BURIAL CEMETERY IN THE NEIGHBOURHOOD AND A NEW CEMETERY TO THE EAST OF THE CURRENT CEMETERY. THE NEW CEMETERY OPENED IN 1998/99 AND IS LOCATED IN THE REGION. A NUMBER OF BURIALS WERE COMPLETED AFTER 1998, BUT IT IS THOUGHT THAT A LATER CONSTRUCTION PROGRAMME WILL BE TAKEN.

CONCEPT


DESCRIPTION

THE PROPOSED SHELTER CONSISTS OF A FORMER ENTRANCE TO AN ENCLOSED AND PEACEFUL, FORMAL THREAD, THEN BURIED INTO THE CEMETERY. THAT STARTS AT THE SOUTH. THE DESIGN ELEMENTS HAVE TO BE IDENTIFIED AND CONCISELY DESCRIBED. CONTAINING A FORMAL ENTRANCE PORTAL, AND A PERMANENT EXPRESSION PHASE, SIMPLIFIED BUT DEEPLY IMPLAINTED, TO THE REGIONAL HISTORY SITE WHERE THE EMERGING SHAPE OF THE CONCEPT IS TO BE TAKEN, WITH THE EXIT SITE OF THE ENTRANCE PORTAL, AND THE NEW CEMETERY.

MATERIALS

THE PROPOSED SHELTER CONSISTS OF A FORMER ENTRANCE TO AN ENCLOSED AND PEACEFUL, FORMAL THREAD, THEN BURIED INTO THE CEMETERY. THAT STARTS AT THE SOUTH. THE DESIGN ELEMENTS HAVE TO BE IDENTIFIED AND CONCISELY DESCRIBED. CONTAINING A FORMAL ENTRANCE PORTAL, AND A PERMANENT EXPRESSION PHASE, SIMPLIFIED BUT DEEPLY IMPLAINTED, TO THE REGIONAL HISTORY SITE WHERE THE EMERGING SHAPE OF THE CONCEPT IS TO BE TAKEN, WITH THE EXIT SITE OF THE ENTRANCE PORTAL, AND THE NEW CEMETERY.

PALMERSTON CEMETERY
PROPOSED INTERPRETATIVE SHELTER
Presenter: Senior Climate Change and Environmental Officer, Jade Leask

Approved: Executive Manager, Mark Blackburn

**PURPOSE**

The purpose of this report is to present for approval the recommended recipients of the Climate Change and Environment Grants Program.

**LINK TO STRATEGIC PLAN**

The issues addressed in this Report are in accordance with the following Goals/Strategies of the City of Darwin 2012 – 2016 as outlined in the ‘Evolving Darwin Towards 2020 Strategic Plan’:

**Goal**
3. Environmentally Sustainable City

**Outcome**
3.2 Darwin community’s carbon footprint reduced

**Key Strategies**
3.2.1 Increased community understanding of climate change and environment issues and mitigation and adaption actions

**KEY ISSUES**

- Applications for funding through Council’s Climate Change and Environment Grants Program were invited on 8 May 2017.
- Applications received by the advertised closing date of 8 June 2017 were assessed and are presented to Council for approval.
- The projects recommended for funding or part funding meet the Climate Change and Environment Grants Program Guidelines.
- Ten applications were received, seeking a total of $89,168.
- Six applications are recommended for funding, totalling $30,980.
RECOMMENDATIONS

THAT the Committee resolve under delegated authority:-

A. THAT Report Number 17TC0033 JL:nt entitled Climate Change and Environment Grants 2017/2018, be received and noted.

B. THAT the following grant applications for the Climate Change and Environment Grants for community projects be approved:

   i) Ludmilla Creek Landcare $10,000
   ii) Lakeside Drive Community Garden $8000
   iii) Australian Trust for Conservation Volunteers $6,680
   iv) CoolMob / ECNT $3,500
   v) Paws Darwin $ 2,250
   vi) GULP / Foodcare NT $550

   Total $30,980

BACKGROUND

At the Ordinary Council Meeting of 28 June 2016, Council approved the Climate Change and Environment Grants 2016/2017 as follows:

DECISION NO.21\4571 (28/06/16)

Climate Change and Environment Grants 2016/2017
Report No. 16TC0039 SG:nj (28/06/16) Common No. 3284258

A. THAT Report Number 16TC0039 SG:nj entitled Climate Change and Environment Grants 2016/201, be received and noted.

B. THAT the following grant applications for the Climate Change and Environment Grants for community projects be approved:

   i. Girl Guides NT Incorporated $ 3,480
   ii. Australian Trust for Conservation Volunteers $10,000
   iii. Nightcliff Arts, Music & Culture Incorporated $ 7,000
   iv. OzGreen Global Rivers Environmental Education Network $ 7,500
   v. Wildcare Inc $ 3,581
   vi. National Trust of Australia (Northern Territory) $ 1,375
   vii. Ark Aid Inc $ 4,000
   viii. Darwin Wildlife Sanctuary $ 6,080
   ix. Australian Youth Climate Coalition (AYCC) $ 7,500

   Total $50,516
DISCUSSION

Each year Council allocates $50,000 for community based climate change and environment projects.

Applications for funding of community projects occurring in the 2017/2018 financial year were invited on 8 May 2017 with a closing date of 8 June 2017. Ten applications were received, seeking $89,168 for climate change and environment projects.

A summary detailing the applications for funding is presented in Attachment A and includes Council officers’ recommendations.

Four applications were deemed not to meet the required guideline criteria as eligible submissions and were not considered for funding under this process. Climate Change and Environment will engage with two of the unsuccessful applicants to look at working with them through the Gardens for Wildlife program. Although not eligible under the grants criteria it was considered their applications had considerable merit and engaging these organisations outside of this funding round was deemed more appropriate.

Six of the applications for climate change and environment grants are recommended for funding to the value of $30,980. These projects have been recommended on the basis of outcomes in context of Council’s strategic direction, environmental benefit, benefit to the Darwin community, organisational capacity to deliver outcomes and value for money. Applications were independently reviewed by a panel of five City of Darwin officers.

Four of the six funded projects have been recommended for partial funding. In this instance, the panel deemed some element of the project to be ineligible or did not believe it was the best value for money. This is further explained in Attachment A.

CONSULTATION PROCESS

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

- Community Development Project Officer
- Strategic Town Planner
- Manager Regulatory Services
- Committee Administrator
- Support Officer Climate Change & Environment
- Trainee Climate Change & Environment

POLICY IMPLICATIONS

“Provide climate change and environment grant funding” is an action under the Climate Change Action Plan 2011 – 2020.
BUDGET AND RESOURCE IMPLICATIONS

The funds allocated for climate change and environment grants are within the 2017/2018 operational budget.

RISK/LEGAL/LEGISLATIVE IMPLICATIONS

Nil

ENVIRONMENTAL IMPLICATIONS

All climate change and environment grants are assessed based on their environmental benefit and those that have been recommended for funding are deemed to provide a definite environmental benefit.

COUNCIL OFFICER CONFLICT OF INTEREST DECLARATION

I the Author openly declare I have a conflict of interest as I am a volunteer with PAWS Darwin therefore I did not assess their grant application and used the other panel members decision and discretion when granting them funding.

I the Approving Officer declare that I do not have a Conflict of Interest in relation to this matter.

JADE LEASK
SENIOR CLIMATE CHANGE & ENVIRONMENTAL OFFICER

MARK BLACKBURN
EXECUTIVE MANAGER

For enquiries, please contact Jade Leask on 8930 0629 or email: j.leask@darwin.nt.gov.au.

Attachments:

Attachment A: Climate Change and Environment Grants assessment
<table>
<thead>
<tr>
<th>Organisation</th>
<th>Title of Project</th>
<th>Environmental Benefit</th>
<th>Amount Sought</th>
<th>Fund Yes or No</th>
<th>Amount recommended</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ludmilla Creek Landcare Group</td>
<td>Creek to sea managing our catchment</td>
<td>better management and long term planning of activities conducted in the catchment.</td>
<td>$10,000</td>
<td>yes</td>
<td>$10,000</td>
<td>Full funding. Support update of management plan.</td>
</tr>
<tr>
<td>Lakeside Drive Community Garden</td>
<td>Education Program and workshops</td>
<td>series of eight workshops on the Lakeside Drive Community Garden.</td>
<td>$8,000</td>
<td>yes</td>
<td>$8,000</td>
<td>Full funding 8 workshops to be delivered on compost, biodiversity etc. The number of workshops the cost for attendees and the engagement of the community are all highlights of this project.</td>
</tr>
<tr>
<td>Conservation Volunteers Australia</td>
<td>Darwin Beach clean ups</td>
<td>Recycling and litter reduction and reduce the impact of litter on wildlife and tourism through clean up and education.</td>
<td>$9,770</td>
<td>partial</td>
<td>$6,680</td>
<td>Partial funding the panel did not support funding of regional manager wages or national support costs. The clean up project is undertaken by similar organisations but the addition of marine debris art will appeal to a wider demographic. CVA have also proved themselves to be competent and deliver outcomes as identified in their grant applications.</td>
</tr>
<tr>
<td>GULP / Foodcare NT</td>
<td>Eat My Words - Tales from tropical cooks</td>
<td>environmental education to the community about waste and food miles</td>
<td>$7,741</td>
<td>partial</td>
<td>$550</td>
<td>Partial funding granted for the Design and print of recipe booklet. This event is a commercial event charging people to attend therefore not considered in need of excessive funding. The number of attendees at the event is also limited making the benefit to the community restricted. The recipe booklet will be available in various locations after the event and will benefit a broader portion of the Darwin community. Support of this portion of the application is recommended. This event has been already placed in the Darwin Fringe Festival programing and will likely go ahead even without Council funding. the event will help promote a reduction in food waste and food miles.</td>
</tr>
<tr>
<td>Coolmob/ ECNT</td>
<td>Reinvigorating coolmob</td>
<td>environmental education to the community about energy</td>
<td>$10,000</td>
<td>partial</td>
<td>$3,500</td>
<td>Partial funding. Support technical review and website content update. No clear vision of how to continue the program into the future. Having a local resource for sustainable living is supported by Council. Not funding salaries and wages or fee for service energy audits.</td>
</tr>
<tr>
<td>Organisation</td>
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</tr>
<tr>
<td>PAWS Darwin</td>
<td>Give adopted cats cat bells and provide community education on responsible cat ownership.</td>
<td>Reducing the impact on local wildlife. Ensure all adopted animals are microchipped and desexed, to reduce number of domestic cats at large.</td>
<td>$9,750</td>
<td>partial</td>
<td>$2,250</td>
<td>Partial funding. This project meets both the environmental and animal management objectives of Council. Considered more appropriate for Animal management to support. Fund cat bells and cages only.</td>
</tr>
<tr>
<td>Ecoscience NT</td>
<td>Discover Darwin's Amazing mangroves</td>
<td>community educational walks and talks about mangroves from leading local mangrove scientists.</td>
<td>$9,980</td>
<td>no</td>
<td>$0</td>
<td>Not eligible under grant criteria. This is a commercial company and not a not for profit community group or charity. This project is free for community to attend and is an amazing opportuntity to educate the Darwin community on the ecological role and importance of our local mangroves. CC&amp;E will discuss with applicant opportunities to work together to deliver a similar project and offer support through CoD Gardens for Wildlife program.</td>
</tr>
<tr>
<td>Alawa Primary</td>
<td>Solar Panels</td>
<td>reduced energy use and securing long term viability of school farm</td>
<td>$10,000</td>
<td>no</td>
<td>$0</td>
<td>Not eligible under grant criteria. Solar panels are deemed infrastructure improvement on private property. Also only benefitting a small portion of the Darwin community. CC&amp;E will look to support Alawa primary through other means such as engaging them with the Gardens for Wildlife project.</td>
</tr>
<tr>
<td>Darwin Bridge Club</td>
<td>Solar panels</td>
<td>reduce green house gases and reduce carbon footprint of building.</td>
<td>$7,727</td>
<td>no</td>
<td>$0</td>
<td>Not eligible under grant criteria. Deemed infrastructure improvement on private property. Also only benefitting a small portion of the Darwin community.</td>
</tr>
<tr>
<td>Darwin Wildlife Sanctuary</td>
<td>Wildlife in Gardens</td>
<td>Educating the community about protecting local fauna</td>
<td>$6,200</td>
<td>no</td>
<td>$0</td>
<td>Not eligible under grant criteria, as it is the same project we funded last year. This project is is an environmental education opportunutiy to teach the Darwin community about local biodiversity. CC&amp;E will discuss with applicant opportunities to work together to deliver a similar project and offer support through CoD Gardens for Wildlife program.</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td><strong>$89,168</strong></td>
<td></td>
<td><strong>$30,980</strong></td>
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</tr>
</tbody>
</table>
OPEN SECTION

Environment & Infrastructure Committee Meeting – Tuesday, 20 June 2017

11. INFORMATION ITEMS

Nil

12. GENERAL BUSINESS

13. CLOSURE OF MEETING