



Technical Services

Director Brendan Dowd

Long-term planning revolves around the Ten Year Capital Works Plan and environmental improvement and urban enhancement have continued to be the key themes that have underpinned Technical Services' activities in the past 12 months.

To ensure relevance and currency, the plan is revised and updated annually, but will at all times maintain a ten year horizon. The Capital Works Plan has been a key input into Council's Ten Year Financial Plan, and is an invaluable tool for ongoing input into the annual Business Plan/Budget.

Within the key theme of environmental improvement, Council has adopted a framework for the development of a Community focussed Environmental Management Plan. The Plan will articulate strategies and actions to improve our overall environmental performance. In addition, Council has approved the development of an Environmental Management System that focuses on the activities undertaken by Council staff and our contractors.

A further significant step in environmental performance has been to enter into a contract with Landfill Management Services to extract methane gas from the Shoal Bay Waste Management Facility and convert it into "green" electricity.

The theme of urban enhancement, in particular improvements to the landscape and parking arrangements at suburban shopping centres, is a key action identified by Council. In support of this outcome construction has been completed at Parap Shopping Centre Market area and Rapid Creek Shopping Centre. Construction of the planned improvements at Malak, Harriet Place, Alawa, Aralia Street and Stuart Park Shopping Centres are scheduled for 2004/05.

The Town Planning Section has completed a Service Review, which has identified the functions undertaken, costs and more importantly, future directions.

In 2003/04 Council rationalised all field operations to the Bishop Street Depot in Woolner. The "Northern Suburbs Depot" is now surplus to operational requirements and Council will consider the options available for future usage.

Over the next 12 months, in addition to delivery of operating and capital programs, the focus will be on:

- water management focussing on reuse of stormwater
- further refining our accountabilities for financial and non-financial performance
- continued delivery of projects identified within the Asset Management Strategy
- finalisation of the Resource Recovery Contract at the Shoal Bay Waste Management Facility
- implementation of the new Outdoor Advertising Signs Code

Environment

Actively encouraging the protection and enhancement of the environment continues to be a key focus area for Council. To achieve this aim, Council has commenced the development of a community focused Environmental Management Plan and an Environmental Management System for Council's own operation.

The Environmental Management Plan will direct Council efforts to high priority issues and drive environmental improvement and protection programs. This will deliver social, cultural, economic and aesthetic benefits. Extensive public consultation and reporting will be a key cornerstone of this plan.

The Environmental Management System will establish best appropriate environmental practice management to Council's own operations and services.

Council's Environmental Management Plan which focuses on "Managing the Environment Today for a Healthy Tomorrow", is available on Council's web site www.darwin.nt.gov.au, at the Civic Centre and at Council Libraries.

Environmental initiatives already in progress include:

Biodiversity and Habitat Protection

- fauna and flora surveys at Rapid Creek and East Point
- Lake Alexander Cassiopea jellyfish study and water quality investigation program
- Telemetric Irrigation System improvements that provide the capacity to better manage our water resources

Environmental Education

- provision of environmental awareness and education programs at Darwin schools
- environmental awareness and training workshops and seminars, including waste auditing training courses for Council staff and contractors
- development and implementation of a cane toad public awareness program in partnership with Frog Watch

Environmental Rehabilitation & Public Health

- foreshore restoration programs
- vegetation and weed management activities throughout Council's parks and reserves
- mosquito control program

Pollution Mitigation

- stormwater management - Gross Pollutant Trap (GPT) efficiency assessments and preparation of a GPT expansion plan for Darwin
- campaigns to reduce littering of public places and parks, including the "NO BUTTS ABOUT DARWIN" program aimed at reducing cigarette butt littering and "Don't Waste Darwin" program aimed at increasing recycling and reducing rubbish and litter in parks and foreshores
- parks and foreshore litter bin audit programs to ensure bin infrastructure is placed appropriately and use is efficient
- public place cleansing and litter control program
- public place recycling - installation of recycling stations in The Mall and Mindil Beach
- pollution incident response activities

Environmental Reporting

- National Pollution Inventory (NPI) reporting on air, water and land emissions at Shoal Bay landfill
- NPI and Australian Bureau of Statistics reporting on recycling and waste management in Darwin
- reporting to the community through fact sheets, displays and events

Community and Stakeholder Collaboration

Council has continued its community and stakeholder collaboration and consultation programs including:

- continued involvement in the development and implementation of the Darwin Harbour Regional Plan of Management through the Darwin Harbour Advisory Committee and Environmental Management Group
- development of environmental partnership programs with industry and stakeholders, including the Packing Industry Environment Council, Tyre Industry, Bagot Community, Clean Up Australia Council, Greening Australia, Frog Watch and other Councils in the region
- development and implementation of various scientific environmental studies based on Council scholarship arrangements with Charles Darwin University

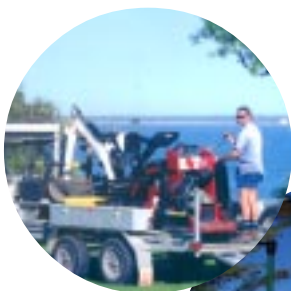
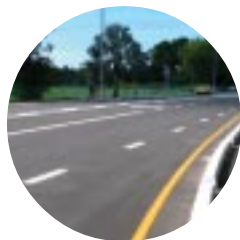
Urban Enhancement

Council carried out a wide range of Urban Enhancement projects during the course of the year, including:

- landscaping of Ross Smith Avenue median strip and the verge to Dick Ward Drive
- development of improvement plans for Malak Shopping Centre, Harriet Place Shopping Centre, Alawa Shopping Centre, Aralia Street Shopping Centre and Stuart Park Shopping Centre. The proposed plans provide a safer and more aesthetic appearance to these centres and have been programmed for construction in 2005. Upgrading works at Parap Village Market and Rapid Creek Shopping Centre have been completed. The NT Government is supporting the upgrade of shopping centres and their contribution is greatly valued
- development of a regional playground with complementary shade, that caters for children of all abilities at the Water Gardens
- Water Garden improvements - retaining walls, new water filtration system, improved landscaping, installation of new footpath and bicycle path lighting

Parks, Reserves and Landscaping Works

- Greening Australia, on behalf of Council, has undertaken weed control and fire breaks along the boundaries of Rapid Creek.
- The Rapid Creek Advisory Committee, in conjunction with Landcare groups, has undertaken a management and monitoring role of the Rapid Creek system to ensure water quality is maintained, weed eradication is undertaken and a review and comment process in relation to the new Airport Hotel was undertaken.
- Installation of foreshore fencing to ensure public safety is maintained has occurred at Larrakeyah Terrace and adjacent to the rain forest area at Doctors Gully.



- The military tower at East Point has been rebuilt using Commonwealth Grant funding to ensure the ongoing heritage of East Point is maintained.
- Landscape architects have been commissioned to undertake a Darwin Central Business District Street Tree Strategy Review.
- Council has continued to provide \$50,000pa to allow for improvements in the parks and reserves for seating, tables, water bubblers, paving and other infrastructure as required.
- Landscaping in accordance with the Gilruth Avenue Masterplan has been undertaken from Chin Quan Avenue to Gardens Road adjacent to Gardens Oval and the Mindil Markets area.
- Council commissioned James Cook University and GHD Engineering to undertake the develop management options to reduce the breeding of Cassiopea Jellyfish in Lake Alexander.
- A new automated irrigation system has been installed at Gardens Oval No. 2, together with top dressing of the playing surface.
- Council has arranged for the installation of lighting, seating, new irrigation and play equipment in Borella Park, Jingili. Significant community consultation occurred as part of this project.
- Council undertakes extensive arboricultural works throughout the suburbs of Darwin on a regular basis.
- Council continues to undertake the administration role for the Thorak Regional Cemetery which is managed by a tripartite agreement between Darwin City Council, Palmerston City Council and Litchfield Shire Council. Management arrangements are, however, under review.

Waste Management

Council continues to provide an efficient and cost effective waste collection and disposal service to Darwin residents. Comparison with other capital and regional cities demonstrates that Council's current waste management charges remain among the lowest in Australia.

The Environmental Improvement Program at the Shoal Bay Waste Management Facility has progressed on schedule:

- construction of a new fully lined waste cell with leachate collection
- Stage 1 of the waste to energy facility which collects methane gas for conversion to energy, was completed five months ahead of schedule
- erosion control work on the batters of Stage 2 of the landfill has been completed at a cost of \$50,000
- improved greenwaste pasteurisation techniques have been implemented to sterilise weed seeds from the mulch and compost products
- planning for the construction of a \$500,000 Recycling Facility has reached the final stages and construction of the facility is scheduled for 2005

Leachate Management

Environmental monitoring data shows that leachate is managed successfully and in compliance with the landfill licence issued by the Department of Infrastructure, Planning and Environment.

The landfill liquid, or leachate, is being collected at de-leaching wells, pumped back on top of the landfill cell and reinjected through dry wells into the landfill. Essentially, the landfill cell is being used as a storage facility to absorb the leachate. Moisture levels are being monitored to ensure that the landfill cell is not over saturated with leachate. This process ensures that leachate is contained within the lined landfill cell.

Greenwaste Management

Shoal Bay mulch processing and sales data show that the high quality manure enriched compost, potting mix, soil blends and garden mulch produced from greenwaste, by Council's contractor Henry Walker Eltin, is proving increasingly popular with residents and industry alike.

A number of value-adding activities mean that better quality organic products are available to the general public and commercial sector at the Shoal Bay Facility. Garden mulch continues to be produced, with product improvements a result of secondary grinding, screening and heat-treating of the processed materials.

Landfill Gas Management

As referenced above, Council has entered into a gas extraction agreement with Land Management Services. As a result of this agreement a landfill gas extraction system has been installed and a green electricity production module is expected to be operational by April - May 2005. Extraction of landfill gases, generated as by-products of waste decomposition, is important not only to reduce harmful greenhouse gas emissions but also to improve public safety and reduce the fire risk.

By extracting and processing the landfill gas, significant greenhouse gas reductions are achieved, with the added bonus of green electricity production.



Resource Recovery

Council has continued to demonstrate its commitment to improving resource recovery operations at Shoal Bay through the allocation of \$500,000 in the current budget for the construction of a Resource Recovery Facility. This facility will replace the current salvage operations and drop-off centre and is designed to be a one-stop shop for the disposal and sale of all recyclable and second hand materials and products.

The current interim salvage arrangements remain in place until completion of the new Resource Recovery Facility. Council is about to enter into final negotiations with a preferred tenderer.

Other Council waste management initiatives planned include:

- a Darwin wide kerb-side pre-cyclone clean up program
- negotiations with government and industry to establish a Drum-Muster site where agricultural drums and containers can be deposited for recycling
- preparation of a Shoal Bay landfill development plan and waste management strategy for Darwin

Town Planning

Statutory Town Planning

Council provides responses to development applications referred by the Development Consent Authority (DCA). Council also has a staff representative at the monthly DCA meetings. Technical assessments are carried out on all development applications, as Council is the responsible authority under the Local Government Act for many technical issues. A comprehensive planning assessment is carried out on all development applications which are major in nature or which could have a major impact in the locality. The number of development applications remained static from the previous year (decrease of 5), but there were a number of large developments proposed and numerous others which had major access and storm water issues to overcome.

Number of referrals from the Development Consent Authority dealt with by Council	170
Number of referrals from the Liquor Commission dealt with by Council	11
Signs applications (Reported to Council) (Delegated to Staff)	30 71
Referrals from the Place Names Committee and other statutory authorities	5
Road closures and Policy Development	7
Total 2003/2004	294
Total 2002/2003	209
Total 2001/2002	246

Some of the major development applications and other matters that Council has provided comment on include:

- Darwin City Waterfront Development
- Lots 6274, 6275, 6276, Mitchie Court, Town of Darwin. 48x3 and 48x2 bedroom flats in six 4 storey buildings
- Lot 725 (26) Woods St (96) Woods Street, Town of Darwin 72x2 and 10x3 bedroom flats in 13 storeys
- Part Lot 5988 and proposed lot 7433, Tiger Brennan Drive, Bayview, Town of Darwin Subdivision to create 30 Lots

In addition, Council has provided comments to the Liquor Commission in relation to applications for new liquor licences and changes to existing licences throughout the Municipality. There have been applications for Liquor Licences for alfresco dining in Mitchell Street and within The Mall area in Darwin City, as well as for recreational premises outside the City centre.

Strategic Town Planning

A Place Names Policy was adopted by Council which guides comments to the Place Names Committee on five proposed new names. Council officers worked for nine months in an effort to gain names for the new Lee Point subdivision in accordance with the Policy. Officers liaised with the Larrakia Development Corporation and the staff of the Place Names Committee to determine suitable names. As a direct result of this effort and representation from Council, one of the proposed suburb names was changed to correspond with our Place Names Policy resulting in the new suburb name of Lyons.

A Backpacker Accommodation Policy and a Bed and Breakfast Accommodation Policy were also adopted by Council.

The Draft Central Darwin Streetscape Strategy was adopted by Council for consultation in the coming year. The strategy will serve as a guide to Council works within road reserves, parks and other Council owned land in the Central Business District.

Signage

The revised Outdoor Advertising Signs Code was adopted by Council. The Code will come into effect once the supporting by-law has been gazetted. The Code is the result of an extensive three year long consultation process and gives the public clear guidelines on how signage within Darwin can be erected.

Extensive resources are spent educating applicants about Council's Signs Code, ensuring signs which are erected have the necessary permits and meet the requirements.

Infrastructure

Drainage

Council continued its commitment to stormwater management and upgrades and provided new systems in specific areas to cater for current and future demand.

Specific works were completed at Nudl Street, Stuart Park, Goshawk Crescent, Leanyer and at Old McMillans Road, Coconut Grove.

Design and documentation for Toy, Drysdale and Gregory Streets in Parap were completed and were tendered. However, a suitable contractor could not be found. It is expected that works will now be constructed in 2004/05.

Roads

Roads to Recovery funding was utilised to undertake reconstruction of:

- Gilruth Avenue from Goyder Road to Smith Street.
- Smith Street East.

Road Safety and Traffic Management

Council has continued its commitment to improving road safety using the Local Area Traffic Management (LATM), Black Spot and minor works programs.

Children and pedestrian safety around schools and shopping precincts remains a priority, along with addressing locations subject to high accident rates.

Projects completed during 2003/04 are specified in the following section. These include the LATM program (\$100,000), which is jointly funded by the Northern Territory Government, the federally funded Black Spots program (\$241,000) and the continuing federally-funded Roads to Recovery (RTR) program. The Roads to Recovery program enables upgrading of existing assets and provision of new facilities to improve the road network in terms of capacity, safety and maintenance.

Road safety and traffic management items typically address issues of traffic speed, traffic volume, pedestrian access and on-street parking.

Detailed investigations are conducted, which include analysis of accident and traffic data, site conditions and observations and input from the local community. Options are developed and implemented on a priority basis related to cost benefit.

Works Completed

Reseal Program

Council resealed 11,000m² and overlaid 8,000 m² of road. Of that, 23,000m² were fabric reseals, designed to minimise reflective cracking.

Walkways

Council upgraded 14 walkways, mainly in the northern suburbs, as part of its program to address safety issues and the amenity of these facilities. Tree root damage from adjoining residences is a major cause of concern.

Street Lighting

Council continued its annual program of upgrading street lighting to Australian Standards. Most of the work related to replacing post top lanterns with outreaches to minimise the shading affect of trees in verges.

Cyclepaths

Council also continued its cyclepath maintenance program, with extensive sealing of cracked asphalt pavements, in particular along Lee Point Road and Trower Road. Other cyclepaths in parks were overlaid.

Footpaths and Driveways

Council had an extensive program of footpath reconstruction to support its push to establish at least one concrete footpath on one side of most roads throughout the Municipality to facilitate quality pedestrian access. Reconstruction of ramps and driveway sections, which are required to match existing structures, was also completed. Council has continued replacing driveways that are at least 50% damaged with concrete. This is a major ongoing program.



Capital Works and other Programs

The following works were completed under the year's program.

Program	Project	Description	Program	Project	Description
Roads to Recovery	Gilruth Avenue Upgrade	Road and drainage upgrading works along Gilruth Avenue between Chin Quan Road and Gardens Road	2003/04 LATM Program	Knuckey / Westlane	Improve pedestrian safety, eliminating right turn access onto Knuckey Street.
	Smith Street	Upgrade Smith Street between Bennett Street and The Esplanade. Improve road safety, drainage and pavement deterioration issues		Trower Road – (Macredie to Delamere)	Improve pedestrian safety by providing additional crossing points and speed reduction treatment with delineation of parking lanes, narrowing of through lanes
Black Spot	Dick Ward Drive / Old McMillans Road	Channelisation, pedestrian refuge and additional lighting		Trower/Henbury Roads Stage 1	Linemark parking lanes and provide adequate right turn lane onto Henbury Road
	Coonawarra Road / Tanadice Street	Intersection channelisation, traffic islands, signs and linemarking		Stuart Park Shopping Centre	Install concrete islands to restrict right turn onto Westralia Street
	Dripstone Road / Goodman Street	Channelisation		Nightcliff Road / Progress roundabout	Relocated crossing point on Nightcliff Road to improve sight distance for pedestrians and traffic
Urban Enhancement	Parap Market Upgrade	Upgrade the Parap Village Market area. Provide a safer, more aesthetically appealing and functional area for use by all members of the public		Trower Road / Scaturchio Street	Improve pedestrian safety, installing central refuge island at intersection
Minor Capital Works	Mitchell Street / Merkur Court	Linemarking and kerbside blisters, improve pedestrian safety		Willeroo Street / Tiwi Gardens	Central island with pedestrian refuge and linemarking
	Dick Ward Drive (near Woolworths)	Pedestrian refuge island		Bauer Crescent	Speed reduction treatment with linemarking and pavement bars
2003/04 LATM Program	Smith Street (opposite Woolworths)	Improve pedestrian safety, pedestrian refuge island directly opposite the new Woolworths		Progress Drive / Jasmine Street	Pedestrian refuge island on Progress Drive near existing bus bay
				Ellengowan Drive	Linemark parking lanes for full length of road

Capital Works and other Programs

Program	Project	Description
	Wellington Parade	Speed reduction, linemarking sharp bend
	Ringwood Street / Darwent Street	Delineation, channelisation and pedestrian safety
	Tiwi Gardens / Erldunda Street	Delineation, channelisation and pedestrian safety
	Mueller Road	Speed reduction treatment, linemarking parking lanes
	Dalwood Crescent	Speed reduction treatment, linemarking parking lanes
	Alawa Crescent	Speed reduction treatment, linemarking parking lanes
	Ryland Road – (Trower to Crisp)	Speed reduction treatment, linemarking parking lanes
	Progress Drive / Hickory Street	Intersection delineation
	East Point Road / Goyder Road	Intersection delineation
Stormwater Drainage	Goshawk Court	Stormwater upgrade to minimise flooding into adjacent properties
	Nudl Street / Verburg Court	Stormwater upgrade to minimise flooding into adjacent properties by providing an alternate flow path which diverts stormwater runoff into Verburg Court.
	Old McMillans Road Park	Stormwater upgrade of the existing park land to minimise flooding into adjacent properties

Cemeteries

The number of services over the past three years are detailed below:

	2001/02	2002/03	2003/04
Thorak			
Cremations	221	235	229
Interments	102	123	117
Darwin General			
Interment	37	33	13

Litchfield, Palmerston and Darwin Councils comprise the Thorak Regional Cemetery Committee. The respondent Councils work under a tripartite agreement that gives the group autonomy for the cemetery's operational management. A review of future management options commenced in 2003/2004.

Darwin City Council controls the operational and maintenance regimes for the Darwin General, Gardens Road and Palmerston Cemeteries.

Darwin General Cemetery is only available for burials for community members holding exclusive right of burial certificates for reserved graves.

Gardens Road and Palmerston Cemeteries are listed under Heritage status.

Property and Assets

Over this period \$469,000 was allocated for the capital refurbishment of buildings. The work involved air conditioning upgrades and the internal and external painting of various Council buildings.

A range of capital works was also undertaken totalling \$425,000. This included installation of a new 'Excelloo' toilet block on Casuarina Drive at Rapid Creek and bud lighting in Cavanagh Street.

Routine repairs and maintenance were undertaken on a variety of Council buildings totalling approximately \$330,000.

Council successfully rolled out a plant replacement program with a net budgeted value of \$769,000. This program involved a changeover policy for sedans, utes, trucks, scooters, a loader and small plant.

Asset Management

The Asset Management Improvement Plan, which was initiated in August 2001, has continued to make positive progress throughout 2003/04. Achievements include developing policies and procedures, as well as greater appreciation by the Asset Management Team, and other staff members of the benefits to be gained from implementation of planned improvements.

During 2003, condition assessments of footpaths, regulatory signs at intersections, pathways, cycleways and off-street carparks were completed and data entered into storage. Since then an inventory of all building components has been undertaken and a 10 year costed maintenance program is currently being developed. In addition, all assets within parks, including trees, are being recorded, with this information being stored as spatial data in Council's Geographical Information Map System where it can be graphically displayed.

A representative sample of stormwater pipes has been examined to provide an indication of the condition of our stormwater system.

Valuation and capitalisation procedures have been reviewed and a revaluation of infrastructure assets completed. The policy and procedures for the creation of new assets have been reviewed and a system to ensure that new assets are added to asset registers has been implemented.

The Council's Authority System has been extensively developed to cater for the requirements of an assets database, and following detailed evaluation, will be adopted by Darwin City Council. This is expected to be available during the first quarter of 2005.

Procedures for the measurement of asset performance, with regard to achieving service levels and for assessing the suitability of existing service levels, have been introduced. Performance indicators are in place. Development of annual and long-term maintenance strategies depend on considerably more information being fed into frameworks, which currently reside with the managers of each discipline. This will be revisited following the adoption of the modified Authority System.

A roads, kerb and gutter condition assessment has been completed. This will now enable an evaluation of the road network's overall condition and provide for a deterioration trend analysis to be made.

The plant replacement policy and procedures have been reviewed and the new policy has been issued and implemented.

Currently, revaluation of all infrastructure assets with the exception of Parks, is being undertaken. This is due for completion by December 2004, Parks asset inventory data will not be available until February 2005.