



# BIG DRY CHALLENGE

for green House



Parliament House is famous for its extensive showpiece gardens. But as in much of the nation, the extended dry weather is presenting challenges.

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Photos: AUSPIC



The weather station on Capital Hill recorded just 334mm of rain for the year to June 2003 (about half the normal amount). Water restrictions are already in place across the nation's capital, and set to increase further in the spring.

While this is creating challenges for all Capital Territory households, it is especially so for the keepers of the largest and most high-profile house in the Territory—Parliament House.

Protecting the 23 hectares of famous turf and gardens surrounding the national parliament building is a labour of love for a small team from the Landscape Services section of Parliament's Joint House Department.

The 10 hectares of turf and 13 hectares of gardens, ranging from a native peripheral to formal gardens and internal courtyards, provide an important visual centrepiece to the Canberra landscape. As an 'asset', the landscaped gardens were valued at \$21 million about eight years ago.

The gardens have already felt the effects of the water rations. The expert team of 16 permanent horticulturists and turf managers has an innovative action plan underway which has so far exceeded required water reductions.

"For the past 12 months we've saved 19.6 per cent in water," says Landscape Services Manager John Lloyd. "The lack of rain has started to impact on the landscape, and we're not facing a really good spring or summer."

The House has a fully computerized watering system, including a complete weather station with moisture sensors, which checks evaporation rates, solar radiation, and even wind evapo-transpiration. It has helped ensure water is fully optimised.

Plans are also on the drawing board to utilise the building's grey/waste water through 'water mining' from the House, treating it on site and using it for irrigation. But Mr Lloyd says it could be up to two years until a system is in place.

While this will help 'drought-proof' the building in the future, faces look anxious when discussing the contingency plans for getting through the present dry spell. The Landscape Services section's dedication in maintaining the landscape to a high standard is obvious.

Parliament House has signed an agreement with the ACT's water authority about how water-use will be reduced through each of the five stages of water restrictions.

Already the native plants around the perimeter of the House grounds have not seen any irrigated water since autumn when level 2 restrictions were introduced. There will be no watering at all outside Parliament Drive (the road immediately circling the parliament building) if restrictions are

increased to the next level, and water will start to be turned off to some turf areas inside the road, and in several internal courtyards, if restrictions are cranked up further. The top-level restrictions of stage five means basically no water on the gardens.

If that point is reached, the cost of replacing the 160,000 trees and shrubs in the parliamentary grounds will be major, says Mr Lloyd. But he believes it is important Parliament House does its part in limiting water-use in times of drought.



"We are happy to be good citizens of Canberra," he says.

Regardless of how bad the drought gets, Mr Lloyd is sure of one thing—we won't be seeing those famous turf ramps which crown the House replaced with artificial turf. He's adamant that the samples of synthetic turf sitting on the floor of his office are only to surface the small number of tennis courts on the parliament grounds.

Innovation has not only helped ensure maximum water efficiency, but has been instrumental in managing other aspects of the environment, such as garden pests.

Landscape Services turf supervisor Jeff van Aalst says they have been able to reduce the use of chemicals by 80 per cent due to the introduction of Integrated Pest Management (IPM) measures, which involve the integration of biological, cultural and mechanical means of pest control.

Mr van Aalst says Parliament's Landscape Services section have become a leader in IPM, since it first began using tiny nematode insects to control scarab larvae in turf areas.

The team joined forces with CSIRO entomologists, from their base just across Lake Burley Griffin, to test the effectiveness of the nematodes on containing the scarab beetle (which can cause enormous damage to lawns). So successful were they, the nematodes have been in use ever since.

The presence of other unsavory pests and bugs is monitored by the use of yellow and blue sticky paper hung on trees. 'Friendly' insects, such as ladybirds, predatory mites and lacewings, are used instead of insecticides to combat the pests attracted to the parliamentary courtyards. The gardeners also use a range of other environmentally-friendly solutions to target certain pests and diseases, including chilli spray, tea tree oil and eucalyptus oil.

Landscape Services has not only broken new ground with its use of IPM, but with the landscape's very foundations—it is literally built on sand. Parliament House was the first full-garden landscape in the world to be developed on a sand-based construction.

The use of sharp, fine sand on the building structure and sandy loam off-structure creates difficulties for water and nutrient retention—even more of a test during a big dry.

"In the early days we had to develop all our irrigation and plant guides ourselves," says Mr Lloyd. "We were industry leaders in plant irrigation and nutrition."

It requires constant monitoring and nurturing, for the benefit of everyone who works in or visits Parliament House.

"We aim to maintain this site to a high visual standard for all occupants—staff, the public, politicians and tourists," Mr Lloyd says.

The external gardens are open to visitors, and areas such as the formal gardens have become popular for weddings and photo shoots. So much so that there are now strict time limits per group and bookings are required.

The gardeners are proud to share the fruits of their labours with visitors. Greenkeeper Paul James explains how it can take two weeks and up to six staff to perfectly trim the hedges surrounding the formal garden. Replacement annuals are even kept in the wings to repair the impact of a clumsy foot print which might suddenly appear in the middle of a garden bed.

Mr Lloyd is fervent about ensuring the continued integrity of the landscape design. He was there from the start, joining the Parliament House Construction Authority in 1987 when the building's architects, Mitchell/Giurgola and Thorp, would gather around a table each week with collaborators Peter G Rolland and Associates and share ideas, fine tune concepts and marry dreams, to create a unified landscape.



This dream is now protected in a working manual for all future Landscape Services employees. The enormous planning effort which went into choosing particular plants for each area in the initial establishment of the gardens has been entrenched. Strict guidelines remain in place to ensure plants requiring replacement are the same species or of similar structure and foliage to the originals. Also entrenched is the continued dedication to the integration of the landscape features with the design of the building itself.

All of which ensures that come rain or drought, the Parliament House precinct will remain a special place for all who drive up Capital Hill. ■

*An ideal opportunity for wider viewing of the Parliament House gardens comes during Canberra's annual Floriade festival from September 13 to October 12. Guided tours of the gardens run daily, except for the two weeks that parliament sits. Two tours are run every Saturday and Sunday. Bookings are essential on (02) 6277 5217.*



## all creatures GREAT AND SMALL

From ladybirds to possums, working in Landscape Services sure brings you up close and personal to all manner of creatures great and small.

Thousands of ladybirds, along with nematodes, predatory mites and other predatory insects such as beetles, wasps and lacewings are released by the gardeners to biologically control destructive insects.

About half a dozen kangaroos have found their way onto the parliamentary turf over the years for a quick feed, a pretty safe undertaking for most—except for the roo that once misjudged a seven-metre drop off the edge of the building.

A welcome sight is a large flock of about 50 ibis who are often seen grazing on turf

on the back ramps of the building by the ministerial entrance.

Then there is Pirelli the Possum who presently keeps house in the Landscape Services' spare tyre rack, where he is offered fresh fruit every lunchtime.

Greenkeeper Paul James says Pirelli arrived last year and has become a regular in their compound.

While some animals are encouraged, the gardeners also have to deal with some not-so-welcome creatures.

Gardeners are regularly called in to remove magpies and other inquisitive birds who have found their way into the parliamentary buildings.

## commitment to training BRINGS REWARDS

At 23, Dwaine Joanknecht is one of the youngest ever supervisors in Landscape Services.

Thanks to the Landscape Services Manager John Lloyd's commitment to training, Dwaine has developed from being a turf management apprentice in 1997 to being appointed Horticultural Supervisor eight months ago.

Working in such a dynamic building, "where something is always happening in the building or grounds", has offered an exciting career for the Year 2000 ACT Apprentice of the Year, who credits much of his success to the support of Landscape Services.

'Replanting a few plants out the front' takes on a whole new meaning when it comes to the 6,000 square metres of conifer ground

cover plants (*Juniperus sabina*) replaced in a recent operation Dwaine oversaw. That's about the size of six house blocks, in an operation which lasted four to five weeks!

Dwaine says the job also has its creative elements, with the seasonal floral displays of annuals in several garden beds, including internal courtyards and the formal gardens on the House of Representatives entrance side (these formal gardens alone contain about 14,000 annuals).

The gardeners themselves choose and design the displays featured in the flower beds. Recent memorable displays in high priority areas, such as the courtyard adjoining the House of Representatives Chamber, have included a red boxing kangaroo and the Federation flag.

