

**2016**

**THE LEGISLATIVE ASSEMBLY FOR THE  
AUSTRALIAN CAPITAL TERRITORY**

**GOVERNMENT RESPONSE TO THE  
NATIONAL ARBORETUM CANBERRA  
FORESTS REVIEW**

**Presented by**

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**Minister for Tourism and Events**

## **Introduction**

The Strategic Forest Review was commissioned by the National Arboretum in 2015 to assist in management planning and decision making in relation to the Arboretum's forest collection.

The Strategic Review presents 72 recommendations in a constructive way that acknowledges the context, purpose and history of the Arboretum.

The Arboretum's overall design is based on a concept of "100 Forests, 100 Gardens".

It is useful to clarify from the outset that the Arboretum's forests are not commercial forests and are not managed for timber or other production. An Arboretum "forest" means an area specifically planted with trees to a particular design or planting pattern designed to highlight a particular characteristic of each tree, including its origins. These designs make the National Arboretum Canberra unique in the world. Most of the plantings are monocultures but there are designs that include two or more different varieties or species.

"Gardens" are areas at the Arboretum, often within the forest designs, that can be utilised for a variety of horticultural outcomes ranging from a grassed area which could include a sculpture to a design with ornamental plants including vegetables and flowers.

This Government Response was prepared with input and advice from the Arboretum's Forest Management Advisory Group, an expert committee that provides advice on technical and policy issues of relevance to forest and land management.

All recommendations have been agreed or agreed-in-principle by the ACT Government.

Forty three recommendations have been agreed and are either underway or will be progressively implemented as the available resources and priorities dictate.

Twenty nine recommendations are agreed-in-principle but require further consideration, planning and/or advice before they can be considered for implementation. These recommendations will be prioritised by the government, taking into account advice from the Forest Management Advisory Group, and where appropriate will be implemented over the next seven years.

## Response to Recommendations

Number	Strategic Review Recommendation	Government Response
1	Consider joining relevant peak bodies as described.	<u>Agreed</u> , to be progressively implemented from 2015-16 as resources allow. Note STEP intention to create relationships with other regional botanic gardens. Note opportunity for Arboretum to take a lead role in establishing an arboretum-specific network.
2	Include the role of research in the Arboretum's mission statement.	<u>Agreed in principle</u> , final wording of mission statement subject to stakeholder input and Ministerial approval.
3	Prepare an interpretation plan for the Arboretum and consider the possibility to use multi-lingual interpretative material to reflect the diversity of countries that the trees represent	<u>Agreed in principle</u> , delivery subject to resource availability. Note use of multilingual interpretation likely to be best achieved through digital solutions eg. apps.
4	Prepare a conservation plan for the Arboretum to better identify the conservation activities that the Arboretum will undertake.	<u>Agreed in principle</u> , delivery subject to resource availability. Plan should be broad and include consideration of the full range of conservation matters- heritage, environment, biodiversity and should look outward as well as internally. Note that existing and planned conservation actions such as seed collection and land management in general are underway and will continue as resources and priorities allow. Note that rocky outcrops are to be included in the scope of a conservation plan.
5	Give a priority to the planting of the most visually prominent forests, i.e. Forest 94 and 91	<u>Agreed in principle</u> , delivery subject to resource availability.
6	Replace <i>Taxodium mucronatum</i> for Forest 91 to avoid possible problems with cypress canker in the future. Consider using <i>Sciadopitys verticillata</i> .	<u>Agreed in principle</u> , delivery subject to resource availability. Species selection to be further considered and finalised in 2016.
7	Prepare a planting plan and associated full list of species for both the trial forests.	<u>Agreed</u> , planning will take place in 2016-17 and will consider the policy issues raised. See Recommendation 8 regarding need for policy approach.
8	Commence the planting of the trial forests after the completion of plantings for the other present forests. This would also give a chance to source propagation material or plants for the trial forests.	<u>Agreed in principle</u> . Planting timeframes are dependent on the purpose of the trial plantings. A policy approach will first define what the plantings are intended for, and thus how, when and where they should be established and managed to be consistent with the agreed policy approach once developed.

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9	<b>Make a very serious attempt to ensure that all of the new plantings (and possibly substantial replantings of threatened species) are done so using provenance material.</b>	<u>Agreed.</u>
10	<b>Remove all the <i>Acacia caerulescens</i> plantings and replace with another tree species. Replacement species previously approved for consideration are given in Section 6.5.</b>	<u>Agreed in principle</u> , subject to further detailed planning and consideration of species selection required including a written rationale for the species, the planting pattern and other factors to ensure consistency with design intent. No removal of healthy trees until replacement planning is completed. Delivery subject to resource availability.
11	<b>Remove Forest 101 from the ANU Forest (and the Arboretum/ANU Memorandum of Understanding).</b>	<u>Agreed in principle</u> , subject to further detailed planning and consideration of species selection required. Delivery subject to resource availability.
12	<b>Re-assess the survival of forest 58. If the survival of the forest is above 50% consider the replanting of the dead trees. If it is below 50% consider the removal of the remaining <i>Ceiba speciosa</i> trees and commence the replacement of the forest.</b>	<u>Agreed</u> , survival was assessed in March 2016 and exceeds 50%. Replacement trees being sourced and will be implemented within existing resources.
13	<b>Continue to regularly check the Cupressaceae forests, keep an accurate record of the location and extent of any infections or possible infections and remove any infected limbs. If there are only occasional losses replace lost trees. However, if any of the species is obviously very susceptible to the cypress canker, replacement should be seriously considered.</b>	<u>Agreed</u> and underway as part of established routine management actions.
14	<b>Re-divide the current Forest 32.</b>	<u>Agreed in principle</u> , timing and final layout of the division will be dictated by the Federation Forest establishment.
15	<b>Retain the remaining Wollemi pines in Forest 32</b>	<u>Agreed.</u>
16	<b>Create a new forest within current Forest 32 ('102')</b>	<u>Agreed in principle</u> Establishment of Federation Forest, subject to confirmation of its continuing relevance and consideration of alternative/complementary uses of this parcel of land. Delivery subject to resource availability.

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17	Establish a new Wollemi planting in Forest 76	<u>Agreed in principle</u> , delivery subject to resource availability. Requires further detailed planning including impacts on Radiata pine forest. Need to define the purpose and management intent for Forest 76, this will drive decisions about management actions such a pruning regimes.
18	Delay the final plantings until a much better idea of the <i>Dracaena draco</i> 's longer term and unprotected frost survival can be established.	<u>Agreed.</u>
19	Source the propagation material (preferably seed) for the remainder of plantings of <i>Cupressus dupreziana</i> ssp. <i>dupreziana</i> , identify an obvious part of the unplanted section of the forest and ensure that the provenanced trees are GPSed at planting and recorded in the database.	<u>Agreed</u> , noting sourcing of seed is likely to be difficult. GPS location is underway as part of established routine management actions. Planting of seedlings can be undertaken within existing resources. Note this recommendation also applies to Var. <i>Atlantica</i>
20	Propagate sufficient trees to complete the plantings for the <i>Betula pendula</i> ssp. <i>fontqueri</i> . These plants can be propagated from cuttings collected from identified trees on site but more seed should also be sourced from the Taipei Botanic Gardens.	<u>Agreed in principle</u> , delivery subject to resource availability.
21	Continue the slow thinning of the <i>Betula pendula</i> ssp. <i>pendula</i> starting deep within the forest and in numbers directly related to the number of <i>Betula pendula</i> ssp. <i>fontqueri</i> already propagated for planting.	<u>Agreed in principle</u> , delivery subject to resource availability.
22	Finish the car park planting in winter 2016. Given the large number still to be planted it will be important to start sourcing plants before 2016. If the carpark will not be prepared by winter 2016, at least prepare the section of the forest at that is outside of the carpark the northern end of Forest 24 and do the planting.	<u>Agreed in principle</u> , 30% of planting to be completed in winter 2016, subsequent planting subject to resource availability.
23	Continue to source propagators for the <i>Populus euphratica</i> . Ensure that this is given a priority and is continued until the forest is fully planted.	<u>Agreed</u> and underway with Yarralumla Nursery. Delivery (planting) timing to be determined subject to success of propagation and subject to resource availability.

Number	Strategic Review Recommendation	Government Response
24	<b>Either buy plants or source seed for the <i>Franklinia</i> and supply it to Yarralumla Nursery for propagation, noting the long lead time required</b>	<u>Agreed</u> and underway with Yarralumla Nursery. Delivery (planting) timing to be determined subject to success of propagation and subject to resource availability.
25	<b>Undertake propagation of the <i>Widdringtonia</i> to replace any deaths and fill any unplanted spaces. For the continued propagation it is recommended that provenance seed be sought.</b>	<u>Agreed</u> and underway.
26	<b>Review and if needed update the stocktakes of the Cypressaceae forests, source seed or seedlings as a high priority and program preparation and replanting activities for autumn 2016 onwards</b>	<u>Agreed</u> . Monitoring is underway as part of established routine management actions Source seedlings underway. Delivery (planting) timing to be determined subject to resource availability.
27	<b>Consider the list of alternative species for selection for expansion of the Arboretum and for replacing of forests 13 and 101.</b>	<u>Agreed in principle</u> , further consideration to be undertaken.
28	<b>Consult with ACT Roads before undertaking replantings or other significant management actions within the road reserve</b>	<u>Agreed</u> , noting there is ongoing consultation and coordination in relation to road reserves and management of roads and road infrastructure.
29	<b>The Arboretum continue to liaise with other ACT Government agencies to ensure urban development and road construction has a positive impact on the Arboretum.</b>	<u>Agreed</u> and ongoing, noting the need to define the Arboretum's preferred access options early in the planning process.
30	<b>Set aside an area of Forest 32 for a future Federation forest and confirm the desired species selection.</b>	<u>Agreed in principle</u> . Establishment of Federation Forest, subject to confirmation of its continuing relevance. Refer to Recommendation 14.
31	<b>Review the management plan for Forest 2.</b>	<u>Agreed in principle</u> . Existing plan is adequate to guide operations but a review in the future is desirable, subject to resource availability.
32	<b>Consider a stronger connection between Forest 2 and the STEP forest and explore STEP having more input into the management of Forest 2.</b>	<u>Agreed</u> , discussions required with STEP. Note STEP links with Greening Australia and Friends of Grasslands could assist.
33	<b>Remove the remaining <i>Eucalyptus</i> and <i>Corymbia</i> trees in Forest 101 and replant the area with a new species from the list in section 9.</b>	<u>Agreed in principle</u> . Refer to Recommendation 11.
34	<b>Replant the <i>Corymbia</i> trees in Forests 98 and 99.</b>	<u>Agreed in principle</u> , delivery subject to resource availability.

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35	Replant the <i>Eucalyptus tricarpa</i> along the Parkway section. These trees will be not be used for the ANU research but will be used for interpretation about the research.	<u>Agreed in principle</u> , delivery subject to resource availability.
36	Continue to use the zoning system to use the climatic conditions of the central valley and identify suitable species that are known to be readily available and that can be successfully grown on the site.	<u>Agreed</u> , noting that the selection of trees and zones is influenced by the circumstances of the ceremonial planting and full adherence to the zoning system may not always be possible.
37	Continue to follow the ceremonial planting policy to have only one planting of any given species.	<u>Agreed</u> , with reference to the Ceremonial Valley only. Other locations including the Terraces, Events Terrace and 100 forests may have more than one of each species.
38	Ensure that the spacing of future plantings is appropriate to prevent trees being overgrown by others.	<u>Agreed</u> .
39	Ensure the future review of the Arboretum Master Plan considers whether the central valley gardens are still a viable and desirable objective, or whether the garden sites could be better utilised for trees.	<u>Agreed</u> . Note design intent for the gardens concept was not to have 100 intensively managed gardens, rather garden spaces, may be a simple sculpture or feature within a forest clearing, for example. Noted that implementation of gardens can be undertaken over a longer time frame.
40	Consider the future of the 100 gardens concept as part of a review of the Master Plan.	<u>Agreed</u> , see also Recommendation 39.
41	Continue the development of the GIS-based asset record and mapping system including a capacity to collect and manage information.	<u>Agreed</u> and underway as part of established routine management.
42	Utilise the asset record and mapping system to undertake future recording of tree condition and other key factors, including whether plants found to be missing in the last stocktake: were never a part of the planting; were part of the planting and need to be replaced	<u>Agreed</u> and underway as part of established routine management.
43	Define the class of 'poor health' in more detail before the next stocktake to achieve a more consistent appraisal of the trees, and particularly if it is to be again done with volunteer assistance.	<u>Agreed</u> and underway as part of established routine management.
44	Promptly remove dead or very poor trees and record the removal.	<u>Agreed</u> , note removal timing is influenced by resource availability and that dead trees in the STEP forest are retained as habitat.

Number	Strategic Review Recommendation	Government Response
45	Continue to encourage and support the Tree Growth Monitoring project and ensure that the Arboretum is fully aware of how the project is progressing.	<u>Agreed.</u>
46	Ensure that the information that has been collected over the past 4+ years is incorporated into the Arboretum living collection database.	<u>Agreed</u> and underway as part of established routine management.
47	Continue to discuss with NCA the opportunity to link the two trial forests in the Arboretum with the trial plantings at the Lindsay Pryor Arboretum. As a part of this, opportunities to share plant material and undertake cooperative management should be considered.	<u>Agreed</u> and underway as part of established routine management.
48	Given the way in which the STEP Forest is now being promoted as a regional botanic garden, consideration should be given to promote it as another component of the Arboretum in the same way as the National Bonsai and Penjing Collection. As a part of this, it should be discussed with STEP how they define 'regional botanic garden' and how they plan to effectively develop themselves to achieve that definition.	<u>Agreed.</u>
49	Undertake management tasks required for the Cork Oak Forest	<u>Agreed.</u>
50	Address safety and amenity issues before encouraging visitors to forest 76	<u>Agreed in principle.</u> Refer to Recommendation 17. Management action to be consistent with agreed purpose and management intent.
51	Lift trees on the edge of forest 76 for fire prevention purposes, and lift trees within the trail corridor for safety reasons, otherwise allow trees to grow naturally.	<u>Agreed in principle.</u> Refer to Recommendation 17. Management action to be consistent with agreed purpose and management intent.
52	Use the southern third of the forest for Wollemi pines	<u>Agreed in principle.</u> Refer to Recommendation 17.
53	Continue to treat blackberry as the 'priority weed' until it is felt to be well under control	<u>Agreed</u> , noting that all Weeds of National Significance have a high priority for control.
54	Work with neighbouring land managers to establish a weed control zone of at least 50 m for the blackberry occurring in areas adjacent to the Arboretum.	<u>Agreed</u> and underway in partnership with ACT Parks and Conservation Service.

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55	Seek to include the Arboretum in any TAMS trialling programs for Blackberry Rust.	<u>Agreed.</u>
56	Address the spread of serrated tussock in the Arboretum with an integrated approach to control that seeks to avoid the loss of any substantial native grass areas that already exist on site.	<u>Agreed</u> and underway.
57	Develop and implement an annual fertilising program.	<u>Agreed</u> and underway.
58	Review the mulching of the forests at least every autumn and ensure that those requiring re-mulching should be done by late Spring	<u>Agreed</u> and underway.
59	Aim to have all of the rock outcrops fit the restoration and management plan before the beginning of the next horticultural contract.	<u>Agreed in principle</u> , delivery subject to resource availability.
60	Review all of the forests with guards and develop a plan for their removal based on its suitability. Include these removals in the volunteer program.	<u>Agreed in principle</u> , delivery subject to resource availability.
61	Complete initial formative pruning in the next 12 months	<u>Agreed in principle</u> , delivery subject to resource availability.
62	Consider the need to maintain views and public access along pathways as a part of the individual forest maintenance plans.	<u>Agreed</u> and underway, noting the need for specific consideration of view-sheds to ensure they are identified and managed appropriately
63	Prepare a plan for the planting and management of the water edge for all of the dams.	<u>Agreed in principle</u> , delivery subject to resource availability.
64	Review and prioritise the proposals to use areas around the dams in Forests 2 and 36 for recreation/barbeque areas.	<u>Agreed in principle</u> , delivery subject to resource availability.
65	Spray and mulch the basins of dead or badly damaged trees when they are removed so as to keep the location very obvious for replanting and stocktaking and to stop the irrigation system damage.	<u>Agreed</u> and underway as part of established routine management actions.
66	Treat all Cupressaceae forests as if at risk, even if there has been no sign of the Cypress canker to date.	<u>Agreed.</u>

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67	Suspicious material found on any species not previously infected should be sent to one of the plant disease diagnostic laboratories.	<u>Agreed.</u>
68	For the future control of Phytophthora, it is recommended that the following be addressed	<u>Agreed</u> as part of the development of a Phytophthora management plan to be undertaken in 2016-17.
69	Provide irrigation systems that allow the use of procedures like pulse irrigation to more efficiently use the water.	<u>Agreed</u> , such a system has most pre-requisites in place and final development will be undertaken in 2016-17 as part of the Water Security project.
70	Ensure that irrigation in all the forests is checked and repaired before every summer. Those forests that are more dependent on irrigation are shown in Appendix 7.	<u>Agreed</u> , maintenance and upgrade work is ongoing as part of routine management actions. Note that the extent of irrigation to be checked dictates a year-round approach.
71	Ensure that all of the irrigation system is fully functional at the commencement of the next maintenance contract and that the upkeep of the system is a part of the contract.	<u>Agreed in principle</u> , noting that maintenance arrangements for irrigation will be reviewed and a decision made at the appropriate time whether outsourcing remains the preferred approach.
72	Re-route or bury the irrigation piping that was run across rock outcrops without it being buried.	<u>Agreed in principle</u> , delivery subject to resource availability.