



LEGISLATIVE ASSEMBLY
FOR THE AUSTRALIAN CAPITAL TERRITORY

STANDING COMMITTEE ON ENVIRONMENT AND TRANSPORT AND CITY SERVICES

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Submission Cover Sheet

Nature in Our City

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29 June 2018

Dear Ms McGill,

Please find attached a submission from the Lake Burley Griffin Guardians on the Nature In Our City Inquiry.

Yours sincerely,



David Mackenzie

Lake Burley Griffin Guardians




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Standing Committee on Environment and City Services
ACT Legislative Assembly
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29 June 2018

NATURE IN OUR CITY INQUIRY

**Inquiry - Standing committee on Environment and City Services
Submission from The Lake Burley Griffin Guardians**

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1. INTRODUCTION

The Lake Burley Griffin Guardians welcomes the initiative of the Standing Committee in inviting public participation in this review and thanks them for their Invitation to make a submission.

While the Guardians is a community based group with principal aims to safeguard the historic, aesthetic, ecological and social values of Lake Burley Griffin (the Lake) and its lakeshore landscape, it recognises that the Lake is interconnected in many different ways with the much wider area of Canberra City than its immediate boundaries. They include the biophysical, cultural and social aspects of a nature based City, aspects of which are implicit in the original concept of the Bush Capital.

The Bush Capital has been embraced and enjoyed for most of Canberra's existence. Its original isolation with extensive surrounds of mostly treeless, farmland, and its earlier paucity of facilities and services drew much criticism. The term 'bush capital' was commonly used to deride Canberra and was certainly part of the age old feud between Melbourne and Sydney. Today, Canberra has come of age, a self-sufficient, 'sophisticated' city with a rapidly growing population. It is a city of wide green, open spaces with gracious vistas, a desirable place to live. Bush Capital is today used more appropriately to differentiate Canberra from other large, less desirable, crowded cities.

Despite these changes the underlying ethos of a nature based city is under threat from planning shortcomings. The Bush Capital concept must not be overshadowed; Canberra cannot afford to be modelled on other major cities, neither here nor abroad, cities that have grown unplanned and without necessarily treating as paramount the health and wellbeing of those that dwell there.

Governance

Land ownership in Canberra is complicated by the city's role as the National Capital and the consequent separation of responsibilities between the Commonwealth and ACT Governments. The Guardians advocacy is centered among this arrangement and much of what we stand for is challenged by it. 'Nature in our City' is geographically much wider than the Central National Area yet is still under the dual control of Capitol Hill and Civic Square. What we advocate here will still be challenged to various degrees by the by the joint requirements of Federal and Territory. Nevertheless, we are confident that both governments will recognise the benefits of daring ventures that weave elements of the natural environment ever deeper into the fabric of Canberra, a healthy city of world renown in which to live.

2. LAKE BURLEY GRIFFIN

Over recent years the lake and its foreshores have become diminished because a lack of an overarching master plan has seen piecemeal development occurring without regard for a consistent planning vision.

This Review into the value of the natural environment and its importance to Canberra is apt. The rapid urbanising of Canberra is in conflict with the focus upon which Canberra was originally established; it is being overlooked and is even disappearing. As Ken Taylor writes in his book *Canberra – City in a Landscape* (2006, Canberra, Halstead Press)

'...the concept and ideal of an Australian Federal capital envisaged a city in a landscape and of the landscape.'

Lake Burley Griffin is central to this landscape and its setting with the hills and mountain ranges as a backdrop and a treed foreshore providing green open space

has always be seen as a significant component in creating a National Capital, a city unique in its setting within a landscape.

The Australian Garden History Society (AGHS), a national body which aims to conserve and raise awareness of cultural landscapes has placed the Lake and its foreshores on a 'Heritage at Risk' List whilst an international group, International Council on Monuments and Sites(ICOMOS) has approached the Federal government asking for protection of Lake Burley Griffin.

Lake Burley Griffin, 'the masterful centrepiece of Canberra' (Visit Canberra) is at the heart of our National Capital. Sir Robert Menzies when 'inaugurating' the lake on October 17th, 1964 stated, 'I see this lake ultimately not as something purely artificial in its surrounding but as a haunt of birds, as a haunt of wild life. Indeed, I am optimistic enough to think the day will come when tourists coming through will be able to feed the swans and this will be quite a feature of the city'.

The Lake Burley Griffin and Adjacent Lands Heritage Management Plan prepared by the NCA IN 2009 states 'the community has clearly articulated views about the heritage significance of the aesthetic qualities of the Lake Burley Griffin landscape, including its open park like setting, its important views and vistas and its natural areas.'

Although change is inevitable in a rapidly expanding city, the current City to the Lake Plan focused upon West Basin threatens to change many of the most appreciated aspects of the Lake and surrounding lake shore.

Unfortunately, the public is not privy to any detailed or even overall plan for the proposed West Basin development despite repeated requests for one and despite repeated assurances that planning is being reviewed.

Other issues pertinent to the Lake as a whole are addressed elsewhere in this submission. The following are trenchant criticisms of some aspects of what the public has been allowed to know about West Basin proposals so far.

- The open green space and recreational parkland of Acton Park will be covered in concrete. The Department of Environment, Planning and Sustainability describes Acton Park as a 'peaceful beautiful lakeside park' of 10.4 ha with a 'historic grove of she-oak trees' which were planted in 1927.
- Unfortunately Acton Park has been seriously neglected while preparation for a densely populated building estate proceeds. This is a commonly used justification for converting open space to urban development and, not confined to the ACT, is frequently engineered to that effect.
- The proposed remaining open space is a mere morsel of what could have been a major 10.4 ha jewel in the centre of Canberra.
- Lake Burley Griffin as it exists today is the result of the design suggested by Walter Burley Griffin (1911) and the technical engineering skills of the National Capital Commission (1958), which recommended modifications to minimise turbulent water flow by making the shoreline more natural and less erodible. The continuous green space of trees and grasslands is an integral component of the lake system.
- The natural lake edges of West Basin, currently valuable habitats for wildlife, are to become hard edged, life-free concrete boardwalks.
- Large open grassed areas suitable for recreational play and family picnics could be created but instead will become oversized pocket parks with

mixed use pathways and hard surfaces eg Rolland Park. This will be a loss of open green space for public use whereas an open grassed, park area similar to that on Black Mountain Peninsula where small children can play safely away from joggers, cyclists and cars is far more desirable and would be well used.

- With the proposed densification of Northbourne Avenue (City and Gateway Plan) open parkland, both close to and within the city, will be even more imperative. The health benefits of green space have been well documented.
- Proponents of City to Lake Project disingenuously claim that the area is currently carpark implying apartments would be more aesthetic. West Basin's carparks can and should be returned to parkland.
- The loss of this parkland to a private residential and commercial building estate will significantly downgrade the current and potential aesthetic qualities of Lake Burley Griffin and its surrounds.
- The proposed residential blocks adjacent to Commonwealth Avenue's northern approach will block the iconic vistas across the Lake to the Bullen and Brindabella Ranges.
- Examples of world famous city centres are quoted as successful examples of building to the water's edge, so why not in Canberra? So the justifications go but such examples are egregiously out of context. Many of these cities are centuries old, the need for open space was not originally recognised and now can't readily be engineered; others bowed to pressures for the prime real estate to be alienated. Would Britain's Westminster ever be demolished for verdant Thames-side parkland? Would West Basin be treated thus, maybe next century? Some cities have rebuilt to more open, modern standards but examples are hard to find. Canberra has the opportunity to maintain generous green belts around *all* its lakes to good effect and no further encroachment should be considered.

Lake Burley Griffin Guardians urges the ACT and Federal governments to continue to maintain the green open parkland, natural lake edges and significant views and vistas of Lake Burley Griffin, not only at West Basin but across the Lake as a whole.

When other cities were building monuments, Griffin planned a lake nestling in its specifically designed landscape as a fitting attribute of a Nation's Capital. We took his concept and delivered on it in 1963. To reduce either the landscaped, publically accessible surrounds or the water body itself is to diminish this symbol of the seat of our government.

As custodians of our National Capital it is incumbent on our elected representatives at Territory and Federal level to continue to respect Lake Burley Griffin's heritage and its position as the jewel of the city in a landscape.

3. WIDER CANBERRA

The Canberra setting is a noble and simple landscape with strong and well defined elements, of which the mountain block along the skyline to the west and south is dominant. For the most part, it is a singularly uncluttered landscape, never petty, deeply satisfying in its sweep and range. Plains, residual hills, gaunt and strong river valleys and gorges, long views to the high country: these are the major elements, of which one is always conscious. G.Seddon 1977

Politics and the Electoral Cycle.

When politics and the electoral cycle neuter good and far-seeking planning, the electorate and its constituents suffer from piecemeal planning, uncertainty, mistrust and budgetary loading. Canberra is not exempt from this joint malady and in our advocacy here, we assume, perhaps naively, that wisdom will prevail and statesmen and women will lead us wisely. We push for strong policies that are costly but have well established environmental benefits that will save money in the long run and re-establish Canberra's dented reputation as a well planned and healthy city. Make it world class

Community Consultation

Planning in the dual governance climate of the National Capital can take decades as evidenced in the history of the National Capital Plan. The consequence is that ideas originating long ago eventually become writ in the NCP and later again come to fruition a generation or more later. In the meantime technology, population and culture change, often exponentially and dramatically.

The justification for developments that were conceived even one decade earlier and are being challenged today loses traction on a number of counts. So it is somewhat disingenuous to use the number of consultations from so long ago to persist with projects heavily challenged today. Further, the technology has failed to improve the reach into the community nor the depth of consultation. Box ticking and 'yes' or 'no'/'thumbs-up' or 'thumbs-down' are entirely inappropriate, even frivolous, for far reaching matters; it only swells the number of respondents. Information on the big ticket projects is not trivial and engaging the minds of the uninformed and disinterested to inform and interest them has not been very successfully mastered. Citizens juries are not empaneled to re-visit major decisions that were made long ago on inadequate consultation. The Guardians are anxious for this to be seriously addressed and rectified.

Environmental Awareness

Late last century environmental awareness began entry to all aspects of our lives. It was promoted by such simple activity as having a block big enough to have a garden where some understanding of how to promote better environment could develop. Today's fast-growing demographic living in a building envelope almost the size of the block or in apartments where a garden, if any, might be restricted to pots is far less likely to be environmentally stimulated. Addressing this has not really improved in the last 20 y or so; small numbers of good scientific speakers get onto TV but the number of people who read beyond their electronic device is dwindling. Much of the discussion in this Nature in our City Inquiry is in danger of being shackled by this socio-ecological and socio-hydrological, call it what you may, shortcomings. The Guardians can only note this concern we do not have any comprehensive answer. We can only join the cry for more environmental education from the earliest age. Maybe enlarge STEM to STEEM.

A. CLIMATE CHANGE MUST BE FACTORED IN.

Canberrans should demand that in all planning decisions serious consideration must be given to accommodating the effects of climate change. The more obvious issues are excesses and durations of temperature and rainfall. Frost, drought, fire and flood have all figured strongly on the lives of Canberrans and as these worsen, and they

are so predicted to do, we must be prepared. Several severe floods and the 2003 fire event took lives and exacted no small toll on the City and on individuals.

B. HABITAT QUALITY

Habitat complexity and connectivity promotes biodiversity and population resilience. This axiom underpins much of what the Guardians advocate for Nature in our City; it applies to both terrestrial and aquatic habitats. Complexity and connectivity in planted green spaces is achieved by thoughtful plantings of under-shrubs and trees resulting in multi-tiered canopies, maybe with altered topography. Canberra's lakes and most of its streams do not flow perennially and are hence more prone to poor oxygenation, accumulation of available nutrients and the resulting algal blooms that restrict the expected enjoyment of them. A wide diversity of plants on land and in the water lessens the frequency and severity of blooms, assists in deoxygenation and promotes greater diversity of aquatic fauna. Healthier lakes and waterways result.

C. HUMAN HEALTH & WELLBEING

Biophilia

American Edward O. Wilson developed the hypothesis of **biophilia**, that humans have an innate tendency to seek connection to nature, for its calming effects. People living in urban areas that feature more trees have better mental and physical health. In other words, parks and nature are good for your brain and there is a growing body of evidence for this 30+ year old hypothesis to evolve into fact. Each year, one in five Australians experiences a mental disorder developed later in life, most commonly anxiety disorders, such as panic attacks or obsessive-compulsive disorder.

This City is not without problems in the health sector. It is ideally placed to relieve its load some by adopting better-planned approaches to generous, adequate and strategically distributed green open spaces for the promotion of improved health and wellbeing. We strongly urge both governments to so do as a high priority.

Sunlight and Myopia

Childrens' eye development has been shown to be impaired by a lack of exposure to sunlight. An epidemic of myopia (shortsightedness) besets primary school children in many Asian countries where protracted hours in front of a screen precludes them from going outdoors; most of them wear glasses and the rate is increasing. Primary school students with serious myopia have a much higher risk of developing glaucoma, cataracts and retinal detachment, all of which can lead to blindness. Further, failure to see a horizon largely curtails the essential exercise of long distance focusing as the eye develops. Children in over-developed, densely populated cities would see little or no sunlight and even less of a long distance vista. Canberra cannot afford this risk to its children and must plan to stop the dense development that robs us of both.

Note: It is regrettable that the Terms of Reference for this review contained neither of the words, 'health' or, 'wellbeing'.

D. GREEN OPEN SPACE

The benefits of parkland and especially well vegetated parkland are well known, well researched, volumes have been and still are being written about them. Yet in many

parts, whether due to lack of funds or pressure from land hungry quarters, the provision of parkland falls short of what is required. Canberra is well served with parkland and reserves in varied formats, many of them highly successful and well patronized, yet in a number of ways the city's parkland falls short of what it might have been. Too many parks are small and less effective, ill equipped with facilities, too far apart to be readily available to all, not designed to attract and hold a wider range of fauna, not interconnected to facilitate the free flow of fauna between them and on to land beyond the urban perimeter.

The call from Canberra's public for more open space, in particular more green, open space, has been loud, clear and persistent for decades. Clearly the public sees the need and wants more, they decry the loss of existing open space (often labelled 'wasted' by opponents) to building, they decry the incremental loss of amenity to proliferating high rise and vigorously call for that to stop, even to be reversed.

Urban high-rise

The need for and the benefits of green open space have been well documented for many decades and the evidence continues to accrue. Creating open space without plentiful greenery is wasted opportunity and Canberra, despite assurances to the contrary has acceded all too often to pressures seeking to minimise areas that should have been large enough to support more than token greenery. A crucial but often ignored element of open green space is accessibility; in denser areas, especially where car usage will be minimised, it must be accessible on foot to those in the local demographic age group. All open spaces in high rise zones must support wider canopied trees to ameliorate the heat-island effect, an effect whose magnitude either is clearly underestimated or simply ignored. Inland Canberra endures a continental climate where summers are already hot so it defies logic that ameliorating the heat island effect is given little more than lip-service.

Examples can be found of new development reducing Canberra's inner city road verges and former open space, instead we should be leading the way to widen existing verges and increase open space overall. We must not fall for the easier, cheaper options; it will not be cheaper in the longer run. Open space is created at the time of putting up new buildings, seldom by removing them (see, Section 2 above).

Canberra's inner city will eventually become a restricted access area for vehicles (e.g. London) but this is a long way off and should not justify overcrowding with high-rise in the meantime; new open space will not readily be levered from today's building areas. Today is when the open space needs to be dedicated and generously so. Instead, the proliferation of closely spaced high-rise buildings along the Gateway corridor and other developing areas, especially around town centres, predominates. Will any be torn down when finally the population overwhelmingly demands the return of purloined open space, green or otherwise?

*Canberra's Civic Centre has no effective green-space at all, and is now rapidly evolving a system of internal courtyards and pedestrian malls, generally paved and very urban in character. G.Seddon
1977*

Inter-city green belts and Nature Reserves

These contribute greatly to Canberra's Bush Capital reputation and their integrity must never be compromised. Incremental nibbling away at the edges must be stopped and every opportunity taken to increase their areas. This includes peri-urban

forested land as well as rural zoned areas much which should be rehabilitated for wildlife habitat rather than alienated for urban development. Good planning can meet these goals. Wherever people want to gather, facilities are needed at a range of levels, playgrounds, toilets, even coffee outlets. There are examples of inadequacy in this department, e.g. Henry Rolland Park toilets, Haig Park playgrounds.

Wildlife corridors

Bushland of all descriptions across the city is fragmented so creating connectivity must be given a high priority; wherever possible urban bushland should connect with the larger reserves and green belts. Every effort must be made to create trans-city corridors and this requires the setting aside of corridor zones including through existing urban zones, clearly a long term view.

Further, all species have their specific habitat needs so vegetated areas need to be designed to provide for the widest range of these requirements. In particular, for all species expected to reside therein, the shape and size of vegetated areas has to provide adequate buffer zones on all sides and water supplies must be accessible to each according to their ranging ability.

To this end, long-term studies must be funded (not 3-year electoral promises) to establish what is needed to support each species expected to reside therein. It is well known that attenuation of natural habitat by encroaching development drives out 'avoider' species while 'adaptor' species move in; not all adaptor species are desirable, e.g. Indian Mynahs. Research then must attempt to address how all or some of these movements might be reversed. Commonly, rehabilitation is addressed with tree planting whereas understory vegetation at several canopy levels is needed to support a wider range of species.

The challenge of admitting non-avian fauna to the trafficked urban areas brings challenges as yet not well met in Canberra. Innovative solutions will not be cheap.

Succession planning for ageing trees

Without succession planning, removal of aged trees is too *ad hoc* and can too readily be used to remove obstacles to development proposals. Their replacement must be informed by suitable long-term planning supported by adequate long-term funding; decide early on to replace individually or treat as a plantation, all together, depending on their location, purpose and the longevity of the species. Applies to open plantations as well as complex multi-tiered plantings.

E. LAKE CATCHMENTS

This segment applies in general to all ACT waterways but principally to the City's constructed water bodies and in particular to Lake Burley Griffin.

The multiplicity of land uses and land ownership in the 1860 km² Lake Burley Griffin (the Lake) catchment presents a complicated management regime. It includes large areas outside of the ACT in which a multiplicity of authorities and management practices make it hard to uniformly regulate for the delivery of high quality water to the Lake. Since its inception in 1963, by far the greatest potential impact on water quality across the Lake's catchment is land use change from urban development and related infrastructure.

The Lake is the drain for all inner Canberra stormwater which includes ageing sewer infrastructure that occasionally leaks into the stormwater system. We acknowledge

the inherent complications and have no real criticism of their management; we understand they are well known and being rectified, albeit slowly.

We have other concerns as follow.

Riparian and littoral zones

The many benefits of properly structured riparian zones are well known. They should be a major component of any well managed littoral zone they must follow the local topography and cannot be flippantly restricted to fixed widths. In the case of our many artificial water bodies, suitable topography will mostly need to be engineered for an effective outcome. This must provide for unrestricted movement of plants and animals alike both transversally between terrestrial and aquatic phases as well as laterally along the interface. This is habitat creation to accommodate greater biodiversity. Habitat makes fish happen.

Much of Lake Burley Griffin is edged with stone wall as required by the formal nature of the Lake befitting the National Capital. However these edges are mostly free of land plants linked to the aquatic phase and there is practically no aquatic plant life. Hard edges support little animal life which denies the benefits of a healthy and functional water's edge.

Accessibility. The thoughtfully designed littoral zone provides a wide range of experiences from direct interaction (paddling in shallow water, hard bottom, sandy beach) to viewing from afar. Timbered walkways meander along the shore above land, swamp or water giving close access to the fullest ecological range, relaxing, educational, healthy. Interpretational panels in selected parts. Hard edges, costly to build but cheap to maintain, may be an easy way to allow people to the water's edge but interaction is stifled.

The Guardians advocate the replacement of any lake edge stone walled waterfronts that are not formally required with constructed riparian habitat. In particular, we nominate the stone wall on the south bank of Jerrabomberra Creek (Section 67 Kingston Foreshore) to be replaced with a vegetated edge to match the north bank (Jerrabomberra Wetland Reserve) and meet up with the existing vegetated edge to the Reserve further westward. The full biotic capacity of the streamline cannot be realised with one side as inorganic stone wall. Among other functions, it is an important source of aquatic juveniles for the Lake.

Much of Lake Burley Griffin's edge is slowly being improved with weed removal but diffraction of land ownership and paucity of funding makes this slow and inefficient. The Guardians urge the NCA and ACT governments to fund a long term program of upgrading the Lake edge to full riparian functionality with continuing funding for effective maintenance. Weed removal, re-sculpted water edges to provide wider wet zones (where there is space) and planting carefully chosen plants will result in a wider variety of habitats. The benefits to the Lake will be a wider diversity of plant and animal life both in-stream and terrestrially, sediment trapping from overland flow – a rich source of nutrients contributing to algal blooms - and a much healthier Lake water body overall.

Providing vegetated wetlands for flora and fauna requires a close understanding of their many interacting functions in this man-made environment and we call on the two governments to fund a full survey with emphasis on identifying 'avoider' and 'adaptor' species (see above) the better to lure avoider species to return and deter

unwanted adaptor species. Funding must account for long term monitoring, nothing in nature is static.

Fish and other aquatic fauna.

The current proposal to manage, perhaps abolish, the carp population with the herpes virus is promising even though significant challenges remain. Bottom disturbance from carp foraging is at odds with habitat for many species of

flora and fauna so carp removal is eagerly awaited. Much of the ecological talk here aims at improving fish habitat whether carp go or stay. Diverse upstream habitat facilitates breeding which feeds juveniles into the lakes and lower streams, including beyond Scrivener Dam. Habitat makes fish happen.

Stormwater Storage and treatment

The Guardians applaud the ACT Government's Sullivan's Creek and Inner North Reticulation Network; five of the ACT's six constructed wetlands are along Sullivans Creek. This is good start. The network strips nutrients from stormwater which reduces algal blooms in the Lake and lowers the peaks of flashy stormwater flows which in turn assists the regulation Lake throughflow. The incidence of Algal blooms still restrict Lake users from its full enjoyment. Blooms would be reduced even more with the advent of many more such constructed wetland schemes on other stormwater streams debouching into the Lake. Significant environmental, social and economic benefits follow.

Constructed wetlands have a reputation for restricting flow and backing up floodwater. Canberra is well protected from this scenario, a conservative approach to wetland design makes it highly unlikely. May this attitude prevail.

Suburban constructed wetlands have a finite lifetime and eventually need to be excavated to remove accumulated sediments with their attached nutrients and urban debris. Continuing maintenance must be a funding component.

The Guardians urge the Federal and ACT Governments to ramp up funding of more constructed wetlands, not only for the protection of the Lake but for the many ensuing additional benefits.

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