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Mr Malcolm Snow  
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20 October 2015

Dear Mr Snow

Thank you for the opportunity to comment on this proposal. Please accept my comments attached.

Yours sincerely.

A handwritten signature in black ink, appearing to read 'D Mackenzie', with a long, sweeping underline that extends to the right.

David Mackenzie

## **Comments on City to the Lake - West Basin Foreshore**

### **Application for approval CttL-S1AW2-CGN-RPT-0001**

by

David Mackenzie<sup>1</sup>

### **CONCLUSION**

**This Application should not be approved in its present form.**

A number of serious shortcomings support this conclusion:

- It refers to Stage 2 (West Basin Estate) but the scope covers only Stage 1.
- That, and the brief time allowed to comment, deny a balanced assessment.
- Serious loss of Open Space is unacceptable as are the footprints and heights of buildings in the West Basin Estate.
- The Proposal and the guidelines that shape it are not well known to the public at large and they require to be made aware of the consequences of this proposal and be allowed to reshape it before re-applying.
- There is a very obvious need for some instrument with over-arching direction to guide the West Basin and City to the Lake development.
- Stormwater drainage and treatment is covered very carefully but some aspects raise doubts and are questioned.

While the Proposal has many meritorious aspects, there is insufficient cohesion. It should not be allowed to proceed with such high expectations that subsequent stages can also proceed without much more scrutiny and protection of important values attached the National Capital and Lake Burley Griffin.

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*This submission comprises two parts, one referencing broadly some comments of others contributing to this consultation and the other to do with water quality and Lake ecology.*

*These comments are largely based on the Works Approval Report.*

### **PART 1**

The following issues have been dealt with variously by other contributors. I endorse and commend to you their comments. Here I make brief additional comments which may partially reiterate their concerns.

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<sup>1</sup> David Mackenzie B.Agr.Sci.Hons. (UOQ). I retired from CSIRO Land and Water in 1998 after a research career in agrostology, agronomy, horticulture, hydrology and landscape science. While I am a member of the Lake Burley Griffin Guardians, these comments are my own except where stated otherwise.  
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### **Scope of this Application**

This Stage 1 Application is closely integrated with subsequent stages of the much larger City to the Lake Project. It cannot sensibly be considered as an isolated component of the whole. Neither Approval nor public comment should have been sought in this form. By so doing it reduces the validity of the public scrutiny process. For this reason the Application should not be approved in its current form.

### **Public Exhibition**

The supporting documentation is voluminous, it taxes the lay person in its scrutiny so it is disappointing that we were given such a brief duration of public exhibition. City to the Lake is not a small project and its importance to the National Capital is not in any doubt. Many of us will not be around to see the ultimate reality but this does not diminish the public's right to contribute sensible and constructive comment in efforts to make it a better Project. However, these conditions diminish the opportunity to contribute fully and I criticise them strongly. For this reason the Application should not be approved in its current form.

### **Loss of public Open Space**

The creation of a new public waterfront with its attendant Boulevard and amenities is an exciting proposal. However, it comes at an expense. Buildings, the seven lots in the West Basin Estate occupy an area that competes for Public Open Space. The principal components of the Public Domain as proposed are ideal improvements for the area and will contribute much toward the aspirational vibrancy and activation of the West Basin.

The only buildings allowed should be those required to provide the services and amenities already planned for the area and to service the major activities for which the Public Domain is intended. Limited floor space for retail activity in harmony with the proposed activities is appropriate adjunct. Residential building in West Basin is inappropriate and should be excluded or, at most, kept to a few, much lower buildings on narrow strip adjacent to Parkes Way with minimum encroachment on open space.

Buildings proposed to flank the west of Commonwealth Avenue are inappropriate for one the most important roadways in the City, from City Hill to Parliament House, a truly magnificent approach, too valuable to be given over to urban encroachment. The view should be through trees to glimpses of the Boulevard and attendant outdoor activities and thence on to the distant hills. Impact on the current Public Open Space requires to be minimised by reducing the number and size of the proposed buildings and restricting them to the northern boundary.

### **Publicity and consultation.**

These plans have been in place for some time, built up quietly and incrementally into a whole plan regarded as immutable. Although considerable efforts are made to make amendments and other proposed planning instruments well known to the public, the consequences of these plans is not known to the majority of the public not directly involved. They are all Lake users and deserve to know what is happening to their Lake.

However, whatever has been put in place by planning and its enabling legislation can be improved by better planning and subsequent legislation. The elements that make up an outstanding National Capital are for generations and centuries to come, the real estate involved here is for the short term benefit of

local business, government finances and a small proportion of fortunate residents. Further, the life of a building might be 30 y or as long as they are worth repairing. Without better overarching planning such as a master plan, what follows might have an even worse impact on the National Capital. The Application should not be approved in its current form until these proposals and the proposed ensuing developments are fully exposed to the public and amended as they direct.

## **PART 2**

My comments here concentrate mainly, but not solely, on stormwater drainage and quality. The ecological communities, threatened flora and fauna species, water catchments and water quality of Lake Burley Griffin, a Designated Area and part of the National Capital Open Space System (NCOSS), are to be protected and supported by sustainable resource management.

While the West Basin lakeshore will be completely artificial and largely devoid of natural or undisturbed flora and fauna, the water column comprises the essential element of the Lake as a whole, to be protected and supported as stated.

### **Works package 1: lake reclamation, construction of a new lake wall etc.**

Reclamation should cause no great concern especially as the arc of the proposed curve has the same set out as the centre of Griffin's original West Basin circle.

While this encroachment is minimal and obviously sets a precedent, it should never be cited as justification for further reclamation of the Lake.

### **Works package 2: construction of landscaped foreshore, boardwalk, pavilions and associated works.**

#### **Stormwater Quality**

West Basin is a partially closed embayment and throughflow in the lake is predominantly zero so currents that would normally dilute smaller pollutant doses and promote aeration are wholly or partly absent except during infrequent, major flow events.

It is imperative that litter and TSS generated from the presumed mix of residential and office buildings as well as the public domain (Boulevard) area must be intercepted and treated. Similarly, soluble pollutants must be stripped from stormwater before discharge into the Lake.

Significant constraints on water quality improvements are listed (*p43*) including the implications of the ultimate integration of WSUD design for the CttL as a whole.

Consequently, quality improvement of stormwater discharging from the West Basin Estate and the adjacent public domain has to be of the highest achievable standard. There is already a considerable history of closures in other parts of the Lake due to bacterial contamination and algal bloom development. Without the most stringent WSUD, this development has the capacity to match or even exceed the magnitude of previous events.

#### **4.3.1 Key [Landscape Design] Features *p24***

The overall description of Landscape design appears to be a well thought out and pleasing combination of park spaces, boulevard and garden pavilions. There will undoubtedly be variations to the proposed layout.

The width of these components is designated by the distance from the waterfront and the proposed building line. As stated previously, preferred changes are for buildings (other than recreational, service, etc) to be restricted to fewer, much smaller buildings against Parkes Way leaving a far greater Open Space for the use of the public.

**Irrigation p24**

*Areas dedicated to bioretention for WSUD purposes are not irrigated as they will be fed by drainage systems and overland flow.*

In the absence of irrigation, what provision is there for supplying water to plants in these areas during long dry periods which we can expect more frequently and for longer durations in future.

**Bioretention and Watergardens p24**

In relation to earlier comments under Stormwater Quality, these Water Sensitive Urban Design (WSUD) initiatives are well considered. The strictest water quality control is essential demanding the need for devices and processes of the highest efficiencies available; the list is not limited to those mentioned here and elsewhere in the Proposal. This is especially relevant considering the list of constraints on p43.

**4.8.1 [Stormwater] Key Features p39**

**Stormwater Quantity and On Site Detention p41**

*The local stormwater quantity targets ..... are as follows:*

- *Reduction of runoff peak flow to no more than the pre-development levels and release captured flow over a period of 1 to 3 days: 3 month ARI*
- *Reduction of peak flows to pre-development levels: 5 year to 100 year ARI*

Appropos the concerns stated above under Stormwater Quality, will not the area under buildings in the West Basin Estate, if allowed to proceed without attenuation, generate more runoff than the existing hard stand of the car parks in West Basin? Overflow could readily discharge inadequately treated stormwater into the Lake.

*Due to the site's proximity to the lake, on site detention has not been adopted for the Stage 1A site, and the above targets have been assumed not to apply. p41*

This appears contradictory and in any case is also of concern. Does it imply that untreated water will flow into the lake? If so, not acceptable.

**Flooding, Overland Flow and Freeboard p42**

*In accordance with the TAMS "Design Standards for Urban Infrastructure 1. Stormwater", the principle adopted for overland flow paths (major drainage system) is that they require sufficient capacity to ensure that flood flows up the to the 100 year ARI do not encroach on private leases.*

This applies only to private leases. It suggests, again, that untreated water will flow into the lake?

**4.8.2 Design Principles**

**Waterfront Boulevard Stormwater Drainage p40**

*In accordance with ACT standards, stormwater drainage for the Waterfront Boulevard has been designed for the 1 in 20 year ARI minor storm event*

The difficulties of drainage in flat gradient are spelled out. However, 1 in 20 y ARI events will surely be exceeded frequently by Canberra's summer storms. Not acceptable.

**MUSIC** p44-5

Already mentioned is the prediction of increasing frequency and intensity of storms.

This has relevance to the queries raised and I ask if the modellers have investigated a range of inputs and parameters that advises the frequency and magnitude exceedances?

Adherence to standards is required but standards accept a level of exceedances.

I believe I have made a sound case for not allowing untreated water to enter the Lake. While a near zero tolerance is difficult to achieve, exceedances for a range of driving data should be stated.

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