

National Capital Authority–Seaplanes on Lake Burley Griffin-Discussion Paper May 2021
Yarralumla Residents Association Submission 17 June 2021
[Seaplanes on Lake Burley Griffin: A Discussion Paper | National Capital Authority \(nca.gov.au\)](#)

CONTEXT

Lake Burley Griffin Recreation Policy and Lake Burley Griffin and Adjacent Lands Heritage Management Plan 2009

Lake Burley Griffin Recreation Policy ([Lake Burley Griffin Recreation Policy | National Capital Authority \(nca.gov.au\)](#)) states that in managing recreation on Lake Burley Griffin (the Lake) the NCA will maintain and encourage a range of compatible recreation opportunities consistent with the special characteristics and heritage values of Lake Burley Griffin and adjacent lands. The Lake Burley Griffin Recreation Strategies identified are:

- ❖ Promote the characteristics and attributes of Lake Burley Griffin in accordance with its national significance
- ❖ Promote a broad range of recreational uses of Lake Burley Griffin that reflects Australian national life
- ❖ Foster commercial opportunities that enhance visitor and community experiences of Lake Burley Griffin
- ❖ Foster sustainable environmental and heritage qualities

The recreation policy reflects the values and policies of the Lake Burley Griffin and Adjacent Lands Heritage Management Plan 2009. The Heritage Management Plan 2009 identifies that the Lake possesses outstanding creative, technical and aesthetic heritage values for the nation and outlines a range of values, policies and actions for its future management and stipulates its use and access:

- ❖ Providing the public with free and open access to the Lake and foreshores:
- ❖ Encouraging public access to the Lake for a variety of non-motorised, water based recreational uses which do not impact on other heritage values
- ❖ Continuing to use the Lake as a stage or setting for large public events (which are temporary and do not impact on other heritage values)
- ❖ Providing opportunities for organised and informal community and family gatherings around the Lake

Sydney Seaplanes Proposed Activities

- ❖ Commuter services between Lake Burley Griffin and Rose Bay in Sydney
- ❖ Amphibious Twin Otter (twin turbine) plane operated by two pilots. Maximum passenger capacity is 14 people.
- ❖ Aircraft will be based at Canberra Airport and operate three return flights per day.
 - first flight departs Canberra Airport, landing in Sydney Harbour and last flight departs Sydney Harbour and lands at Canberra Airport
 - middle two return flights are proposed to land and take-off from the Lake with first landing on the Lake at 10.00am, departing at 10.30am and second landing is 3.30pm, departing at 4.00pm.

South Coast Seaplanes Proposed Activities

- ❖ Tourism-focussed operations between the south coast of New South Wales (NSW) and Lake Burley Griffin
- ❖ Maule aircraft (a single-engine aircraft with short take-off and landing capability)
- ❖ Initially short scenic seaplane operations around Canberra with longer term focus on products for inbound (international) tourists including direct connections with the south coast and Snowy Mountains tourism attractions.
 - Initial timing and frequency of any flights limited to one or two days a week between 9.00am and 5.00pm in summer months, and reduced hours in the low, winter season
 - Longer term the growth in number of services would be determined by demand.

YARRALUMLA RESIDENTS ASSOCIATION

SUBMISSION

Note: Attachments 1 and 2 provide the supporting detailed information and analysis

1. Impact on access to the Lake and Lake Foreshore by Lake Users and safety of Users

- ❖ The proposals do not accord well with the Lake Burley Griffin Recreation Policy which seeks to:
 - Promote a broad range of recreational uses of Lake Burley Griffin that reflects Australian national life
 - Foster commercial opportunities that enhance visitor and community experiences of Lake Burley Griffin
- ❖ The proposals are not aligned with the Lake Burley Griffin and Adjacent Lands Heritage Management Plan 2009 which underpins the Lake Burley Griffin Recreation Policy and stipulates Lake Burley Griffin's future use and access:
 - Providing the public with free and open access to the Lake and foreshores
 - Encouraging public access to the Lake for a variety of non-motorised, water based recreational uses which do not impact on other heritage values

The Sea Plane proposals will have a major impact on access to the Lake and foreshores as, unless individual use of the Lake is restricted from the flight path and landing area, the safety of those undertaking in or on water activities will be at risk. This applies particularly to individual and small group Lake users including Swimmers, Kayaks, Canoes, Windsurfers, Paddle Boards and small Dingy Sailors and Rowers. This is especially the case when people are in the water and craft are capsized and so difficult to see from the air. Also the Plane may cause accidents, such as capsizing because of the proximity of the plane. The photograph below shows the juxtaposition of the Sea Plane when landing and sailing school boats.

For the organised sports of Sailing and Triathlons the race and event courses used by the sporting organisations and their training areas, are in direct conflict with the proposed flight path and landing strip across Tarcoola Reach, West Lake and between Lotus Bay and Springbank Island. The area to which access would need to be restricted to enable the Sea Planes to overfly land and take-off safely would be large and the number of users impacted also large.

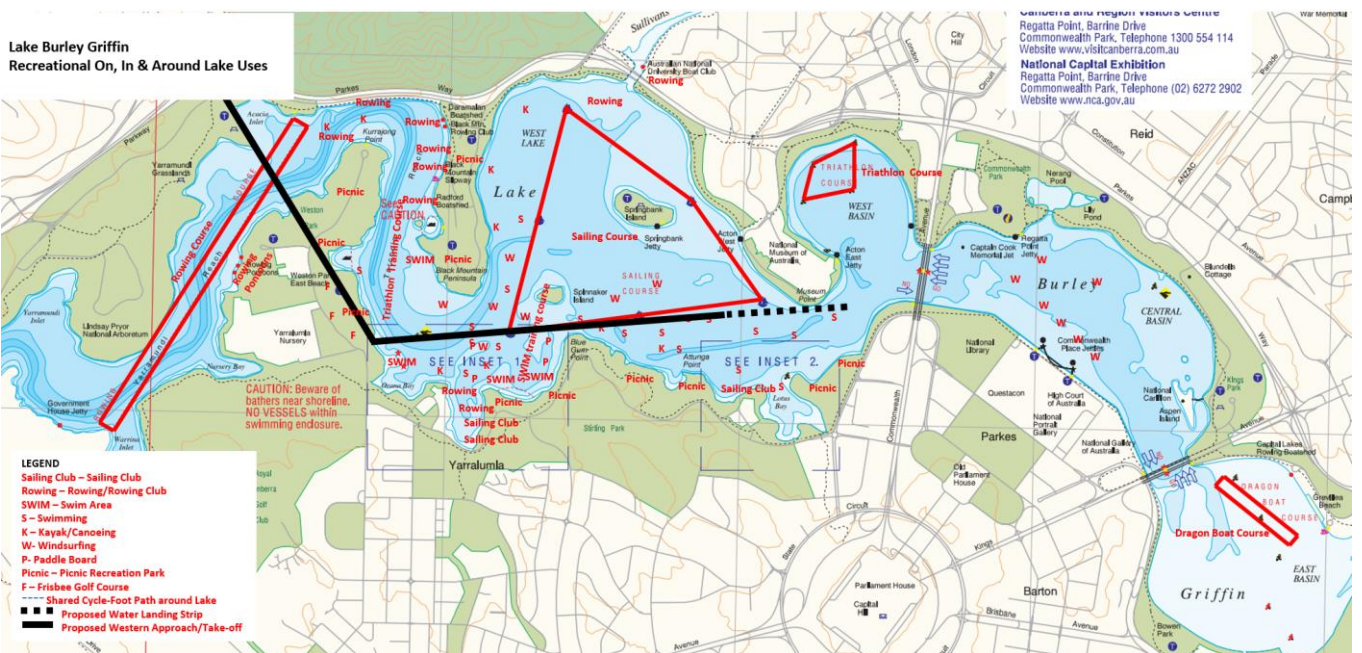
There are over 25 major sports organisations that regularly use the Lake and have frequent major events including national and international championships. For example the Canberra Yacht Club had 1,101 members in 2019 and one of their recent events the Optimist Championships had 126 boats competing. The Canberra Yacht Club has 28 races on Sundays and 12 major regatta events each year. The Canberra Girls Grammar School has 95 Students who are rowers. Triathlon ACT also has 12 major events each year. Rowing ACT has already hosted the ACT Open & Masters Rowing Championships in March 2021 in which there were 60 events and 250 competitors and 611 seat for attendees. The YMCA Canberra Aquatic Recreation centre has recorded in its 2019-20 Annual Report the number of participants at the Paddle Hub at 545, Sailing Club participation 174, and the Runners Club participants 679.

The proposed Westerly Flight Path and Take-off/Landing zone takes the Seaplanes through the main, high density use recreational area of Lake Burley Griffin for all these sports. The width of the Lake is at its narrowest here being only 183m wide between Spinnaker Island and Blue Gum Point and 268m between Museum Point and Flynn Drive. This contrasts greatly with the examples in the Discussion Paper of Seaplane use in Sydney Harbour which is nearly ten times the size of Lake Burley Griffin and the Great Barrier Reef which is 54,000 times the size.

Sea Plane makes trial landing over Canberra Yacht Club Sailing School students at Lake Burley Griffin 15 December 2020



Lake Burley Griffin Recreational On, In and Around Lake Users (Note larger size image is at Attachment 2)



2. Canberra already well serviced for commuters and visitor and community benefits not demonstrated

- ❖ The proposals do not accord well with the Lake Burley Griffin Recreation Policy which seeks to:
 - Foster commercial opportunities that enhance visitor and community experiences of Lake Burley Griffin

The Sydney Seaplanes proposal is for a commuter service between Canberra and Sydney, it is thus not directed at encouraging tourism or enhancing visitors and community experiences of Lake Burley Griffin. The number of passengers transported is small at a maximum of 14 per flight. Only two of the 4 flights will take off and land on the Lake the other two will use Canberra Airport. The difference in travel time from the centre of Canberra to the Airport and from the Canberra Airport to the proposed Sea Plane landing site is only 1 minute by taxi. The ticket sales income will be earned by the NSW registered company rather than the ACT. Take-off, landing, taxiing and overnight parking fees at Canberra Airport will be charged for two flights. There are no known fees for such use of Lake Burley Griffin. The economic benefit for Canberra will be small. The proposal is thus not one that will “enhance visitor and community experiences of the Lake”, and as covered in other sections will have an adverse impact on community experiences of the Lake.

The Canberra-Sydney route currently has comprehensive services for travel by air, coach, train and good highways for travel by road - this includes 12 daily return flights, 13 daily return coaches and 3 daily train services. These can transport more than 2,500 passengers per day and the number of services can readily be increased. These services cater for business travel, commuters and visitors.

The South Coast Seaplanes proposal is for scenic flights. Passenger capacity on its planes is 3 to 4 adults. The number and timing of flights is not known as growth is proposed by demand - with two planes operating this could be up to 8 flights per day. The numbers of passengers per day could be around 32. It is not clear whether any onshore activities, such as a visit to the National Museum, would be undertaken as the purpose of the flights is scenic. The company is also NSW registered.

The Canberra Regional Visitor Centre on the shores of East Basin Lake Burley Griffin currently receives 180,000 visitors per annum, the proposed services would add less than 0.9% to this number.

The economic benefit for Canberra from the proposals will be small. The commuter service proposal in particular is not one that will “enhance visitor and community experiences of the Lake”. As covered in other sections there is likely to be significant impact on visitor and community experiences of the Lake.

3. Impact on the amenity of the Lake and its Foreshore (noise and health)

- ❖ The proposals do not accord well with the Lake Burley Griffin Recreation Policy which seeks to:
 - Promote a broad range of recreational uses of Lake Burley Griffin that reflects Australian national life
- ❖ The proposal does also not align with the Lake Burley Griffin and Adjacent Lands Heritage Management Plan 2009 in
 - Providing the public with free and open access to the Lake and foreshores
 - Encouraging public access to the Lake for a variety of non-motorised, water based recreational uses which do not impact on other heritage values

Noise

The Acoustic Assessment of the noise impact of the proposed Sea Plane activities has failings in its approach, contains some unsound assumptions and provides an inaccurate preliminary assessment. The assessment is

based on one landing and take-off by a smaller single engine sea plane, measurements were on the land and those from 2 of the 3 points and had a limited number of observations. The background noise reading was increased by crown noise and clapping and compared to the standard background noise in a residential suburb. The Lake Foreshore comprises public open space parkland and occupy 3.139 km² (776 acres) in total and is not subject to normal residential noises of leaf blowers, trucks and lawn mowers.

The maximum noise levels at the measurement points for take-off and landing were reached 83 to 90 dBA, this compares to the ACT daytime zone noise standards is 45 to 60 dBA for residential areas. There is no standard or assessment of the background noise on the Lake itself.

These maximum noise readings are significantly above the average background residential noise levels. The number of sea plane arrivals and take-offs per day once the services are established is not certain. There could be in the order of 12 or more separate take-offs and landings per day about one every 40 minutes with 20 minutes of manoeuvring.

Lake Burley Griffin has an expansive setting in a bush parkland environment and provides a national and recreational setting that is aside from the noise and business of a major city and this is at the heart of Canberra being the "Bush Capital". This setting and amenity will be disrupted by introducing the noises, sights and emissions associated with an Airport. This aspect has not been taken into account in the discussion paper. Residents and visitors are concerned about this aspect and also the impact on wildlife in the surrounding parklands, in particular birds.

The acoustic assessment totally discounts the noise impact on the Lake Foreshore Users, Lake Park Users and On and In the Water Lake Users as due to "the transient nature of its human occupants" (Page 33). The nature of On and In Lake Users is described in the previous sections) and their number is in the 100's and 1000's depending on the day and time of year. The Lake Foreshore is also widely used by families, groups and sporting organisations for recreation including picnics, walking, cycling and running and for holding major events.

The disruption to the amenity of the Lake is likely to have a major impact on its use and attractiveness as an area of recreation and national significance.

Health

There are also possible health impacts from aerosol emissions by the Sea Plane activity. The on water landing strip and take-off and landing area are in an area of very high Lake Use (see map). The proposed De Havilland Twin Otter uses Jet Fuel (Avtur) a Kerosene-based hydrocarbon fuel. Temporary or persistent health effects from jet fuels and their combustion can occur from sub chronic or chronic exposure and include: cancer, skin conditions, respiratory disorders, immune and disorders, neurological effects and visual and hearing disorders.

Maule planes operate on minimum grade aviation gasoline (Avgas). Avgas contains lead in the form of tetraethyllead (TEL), a toxic substance, used to prevent engine knocking (premature detonation). Lead is a health hazard and can be taken into the body through the air or by ingestion. Lead is stored in the bones and teeth, and may damage the liver, kidneys and brain. Children are particularly susceptible to the impact of lead.

The possible impact on terrestrial and aquatic wildlife is not known.

Detailed Information and Analysis - ATTACHMENT 1

Sea Planes - Types, Fuel and Health matters

Sydney Seaplanes proposal is for a De Havilland Twin Otter twin engine turbo prop with 14 seat passenger capacity. Production of the De Havilland Twin Otter planes ceased in the late 1980's. Sydney Seaplanes fleet currently consists of De Havilland Beaver seaplanes that takes up to 6 passengers and a Cessna Caravan seaplane that takes up to 10 passengers. Sydney Seaplanes does not currently own a Twin Otter plane.

Twin Otters use Jet Fuel (Avtur) a Kerosene-based hydrocarbon fuel. Kerosene-based hydrocarbon fuels are complex mixtures which may contain up to 260+ aliphatic and aromatic hydrocarbon compounds including toxicants such as benzene, n-hexane, toluene, xylenes, trimethylpentane, methoxyethanol, naphthalenes.

Temporary or persistent health effects from jet fuels and their combustion can occur from sub chronic or chronic exposure and include: cancer, skin conditions, respiratory disorders, immune and hematological disorders, neurological effects, visual and hearing disorders, renal and hepatic diseases, cardiovascular conditions, gastrointestinal disorders, genotoxic and metabolic effects (Ritchie, Glenn; Still, Kenneth; Rossi III, John; Bekkedal, Marni; Bobb, Andrew; Arfsten, Darryl (2003-01-01). "Biological And Health Effects Of Exposure To Kerosene-Based Jet Fuels And Performance Additives". Journal of Toxicology and Environmental Health, Part B. 6 (4): 357–451. doi:10.1080/10937400306473. ISSN 1093-7404. PMID 12775519. S2CID 30595016).

South Coast Seaplanes currently operates two planes a 1976 Maule M5-235C Registration VH-YLJ which is a 4 seat cabin aeroplane (pilot plus 3 adults/children) and a 1996 Maule M7-235C Registration VH-DRI which has two seats up front, bench seat for three behind, and an area that can be used as kiddies seats (pilot plus 4 adults).

Maule planes operate on minimum grade aviation gasoline (Avgas). Avgas contains lead in the form of tetraethyllead (TEL), a toxic substance, used to prevent engine knocking (premature detonation). Replacement by unleaded fuels is under investigation. Use of lead in the fuel for motor vehicles was phased out in Australia in 2002.

Leaded petrol used to be a source of high levels of lead in the air of major cities. Significant reductions in the levels of air-borne lead were achieved over recent years as the result of national legislation introduced to remove lead from petrol.

Lead is a health hazard and can be taken into the body through the air or by ingestion. Exposure to lead can affect the health of children, unborn babies and adults as lead is stored in the bones and teeth, and may damage the liver, kidneys and brain. Children are particularly susceptible to the impact of lead. The national recommendation for all Australians is to have a blood lead level below 10µg/dL (micrograms per decilitre) as determined by the National Health and Medical Research Council (NHMRC). A single exposure, like eating a leaded-paint flake the size of a five cent piece, can increase blood-lead levels for several weeks. Some of this lead will remain in the body for life. [Air Quality - Lead \(environment.gov.au\)](http://environment.gov.au)

The possible impact on terrestrial and aquatic wildlife is not known.

Canberra -Sydney and Canberra-South Coast Transport Services

Canberra is currently exceedingly well serviced by transport. For the Canberra-Sydney route there are on average 11 return flights to Sydney per day with Qantas. There are 13 Canberra-Sydney return daily coach services with Murrays and three daily return train services. These are in addition to travel by car which takes 3 hours 20 minutes from the city centre of Canberra to Sydney.

Travel from Canberra Airport to the City is takes 8 minutes by car or taxi and is 7 km. Travel from the National Museum of Australia (the proposed landing site for the sea planes) to the City by car or taxi takes 7 minutes and is 3km.

There are daily coach services by Murrays from Canberra to the South Coast and Canberra to the Snowy Mountains as well as travel by car.

Lake Burley Griffin

The surrounds of Lake Burley Griffin are comprise public open space parkland and occupy 3.139 km² (776 acres) in total. The area is very popular for recreational activities and has many barbeque and picnic facilities, swimming areas, seating, and a shared path around the entire lake shore used for commuting and recreational cycling, running and walking. Recreational fishing occurs around the full Lake shore. There are major parks that are reserved for public recreation including. Commonwealth, Weston, Kings and Grevillea Parks, Lennox Gardens and Commonwealth Place.

The Lake itself covers 6.6km² and it is 310m wide at Commonwealth Avenue Bridge and 1.2km at its widest point ([Lake Burley Griffin - Wikipedia](#)). However, the width of the Lake is at its narrowest at the proposed Westerly seaplane take-off and landing zone, being only 183m wide between Spinnaker Island and Blue Gum Point and 268m between Museum Point and Flynn Drive. This contrasts greatly with Seaplane use in Sydney Harbour which is nearly ten times the size of Lake Burley Griffin and the Great Barrier Reef which is 54,000 times the size – the two examples of seaplane use used in the Discussion paper.

Lake Burley Griffin is heavily used for a broad range of individual, small group and organised sporting recreational activities on the water. Individual activities include swimming in the beach areas and also cross lake swimming by small groups as well as organised triathlon events in West Basin and Taroola Reach. On water individual activities include Kayaking, Canoeing, Windsurfing, Kite surfing Stand-up Paddle boarding, Sailing and Model boat sailing. Regular club and organised on or in water activities which include major national championship events and racing activities include Rowing, Sailing, Triathlons and Dragon Boats. The organisations involved in these activities are many and include: Burley Griffin Canoe Club, Kayak Canberra, Canberra Fisherman's Club, Dragon Boats ACT, Rowing ACT, ACT Academy of Sport (Rowing), Rowing Australia, ANU Boat Club (Rowing), Black Mountain Rowing Club, Canberra Rowing Club, Capital Lakes Rowing Club, Australian Defence Force Academy (Rowing), Canberra Grammar School (Rowing Club), Canberra Girls Grammar School (Rowing Club), Daramalan College Rowing Club, Radford College (Rowing Club), Royal Military College Duntroon (Rowing), Australian Institute of Sport (Rowing), Marist College Canberra Rowing Club, Canberra Yacht Club (Sailing), YMCA Sailing Club, YMCA Paddle hub, YMCA Runners Club, Sea Scouts Sailing Club, Traditional Boat Squadron Australia (Sailing) and Triathlon ACT.

Sea Plane Trial and Acoustic Monitoring

The impact of noise from the Sea Planes to users of the Lake and its surrounds, and to wildlife are of concern.

The Acoustic Assessment of the noise impact of the proposed Sea Plane activities has failings in its approach, contains some unsound assumptions and provides an inaccurate preliminary assessment.

The Seaplane trial was of a single flight with a single test landing and take-off on Lake Burley Griffin on 15 December 2020. The trial was undertaken with an amphibious single-engine Cessna Caravan aircraft. This plane is quite different to the planes proposed by the two proponent companies.

The plane proposed by Sydney Sea Planes is a De Havilland Twin Otter which is a Twin Engine Turbo Prop plane with greater carrying capacity. This plane would be much noisier. Nor is it the same as the Maule Sea

Plane proposed by South Coast Sea Planes which would also be noisier. Indeed the company's website states that "we use advanced headsets which keep things nice and quiet, and will allow you to talk among yourselves and to the pilot".

The noise monitoring was only undertaken at three points on land with limited data from two. These monitoring points were on the western approach/take-off route at Yarralumla Bay (the trial docking station) and Lotus Bay and at one point near the on lake runway strip at Acton Peninsula (Museum Point) near the proposed future docking station. Limited data and observations were provided for the EPA locations at Lotus Bay and Museum Point.

The background noise at the noise monitoring point for the trial landing at Yarralumla Bay was disrupted by the crowd of spectators resulting in a higher background reading. The assessment puts the background noise at the three measurement locations in the range 45 to 50 dBA.

The overflight noise level at the closest residential areas was not measured but has been estimated for Brown Street and on the corner of Hopetoun and Fitzgerald Street. This has then been compared to the standard average background noise level for residential areas, and influences such as lawn mowers and leaf blowers. The ACT daytime zone noise standards is 45 to 60 dBA LAF 10 for these residential areas.

The preliminary assessment assumed typical daytime background and neighbourhood noise sources (45 – 60 dBA) however these background noises do not occur on the Lake Foreshore and the Lake itself. The assessment totally discounts the noise impact on the Lake Foreshore Users, Lake Park Users and On and In the Water Lake Users as due to "the transient nature of its human occupants" (Page 33).

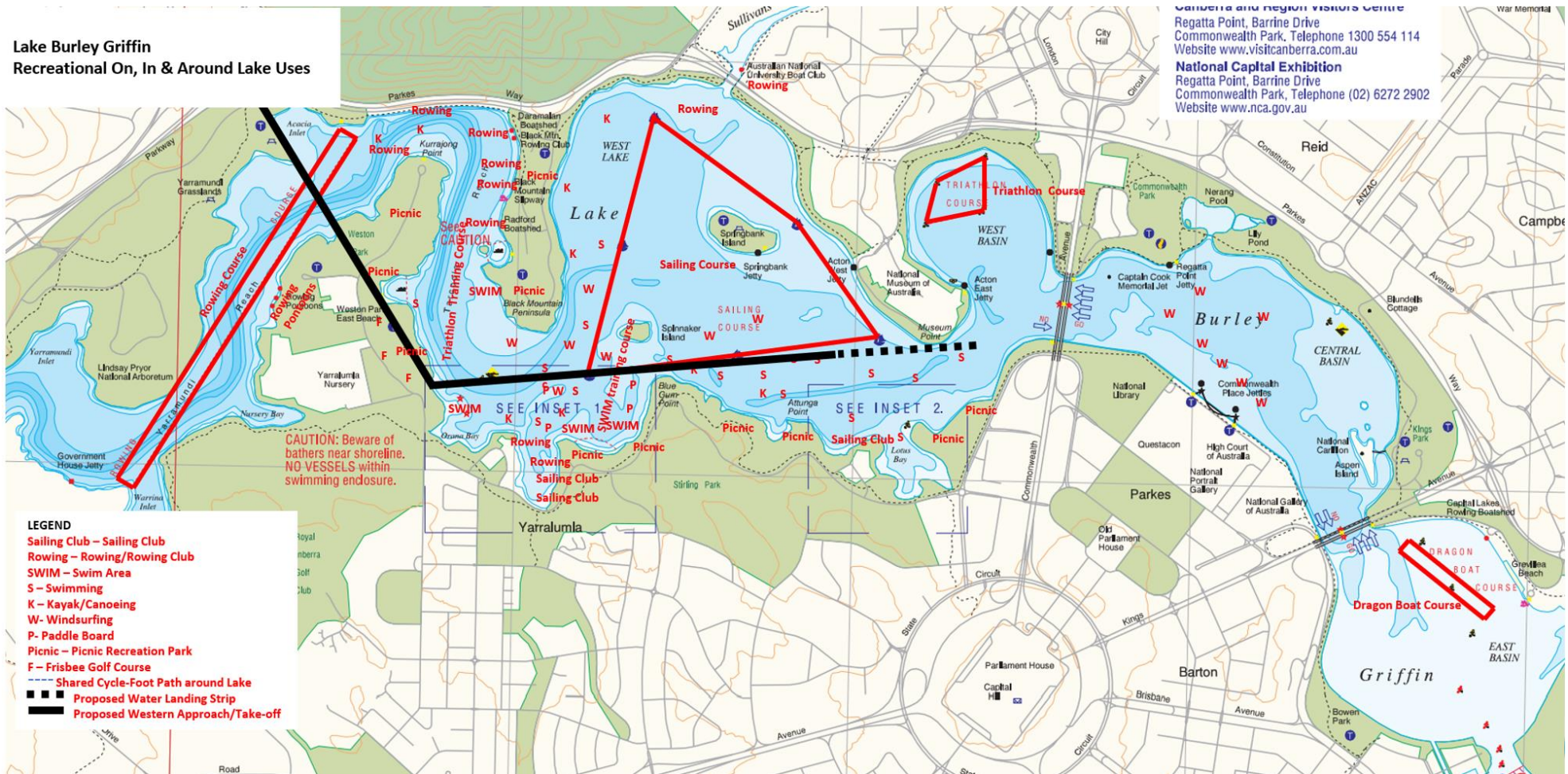
The NCA Consultation Paper-Appendix A Noise Measurement Time Histories graphs show that the maximum noise levels at the measurement points for take-off and landing were reached 83 to 90 dBA. This is significantly greater than the adjacent to the water measurement of background noise which was higher than normal owing to spectator noise at the prime measuring location.

The technical report of the noise assessment (NATIONAL CAPITAL AUTHORITY LAKE BURLEY GRIFFIN SEAPLANE TRIAL PRELIMINARY ACOUSTIC ASSESSMENT) itself notes "the entire assessment has been extrapolated from measurements made during a single seaplane flight. This introduces a great deal of uncertainty to the assessment and all findings or observations should be taken as preliminary only" (Page 31 of the NCA Consultation Paper).

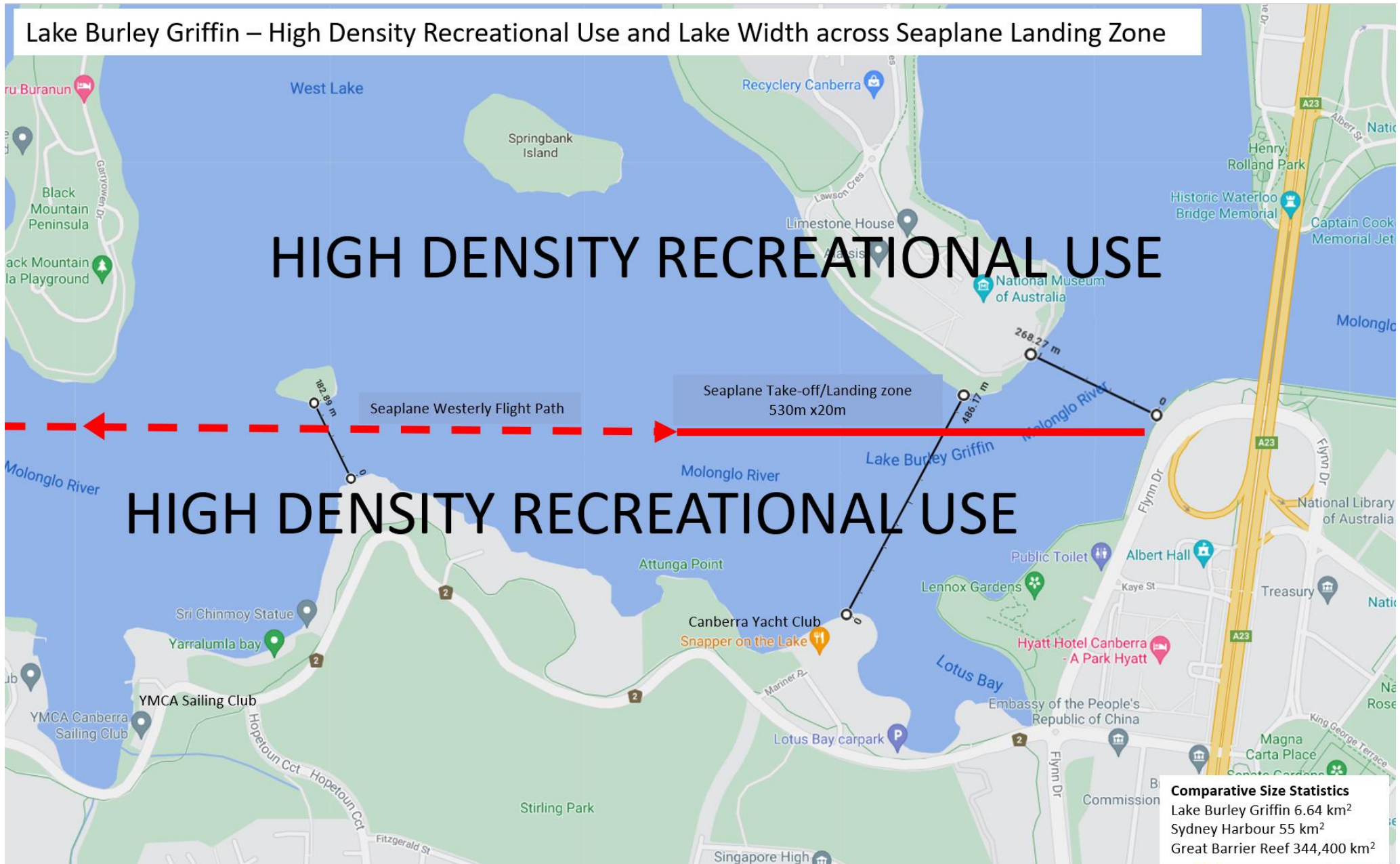
The Users of Lake Burley Griffin and its Foreshores – ATTACHMENT 2

LAKE BURLEY GRIFFIN RECREATIONAL USE

Lake Burley Griffin
Recreational On, In & Around Lake Uses



Lake Burley Griffin – High Density Recreational Use and Lake Width across Seaplane Landing Zone



Sea planes proposal

Sydney Seaplanes would use a De Havilland Twin Otter 14 passenger twin engine turbo prop seaplane like one below



Sydney Seaplanes current Cessna Caravan single engine prop seaplane used for trial landing on Lake Burley Griffin 15 December 2020



South Coast Seaplanes current Maule single engine prop seaplanes that seat 3 and 4 adult passengers respectively (L to R)



**Sea Plane makes trial landing over Canberra Yacht Club Sailing School students at Lake Burley Griffin 15
December 2020**



SAILING



ROWING



Eights competing in the 2016 ACT Rowing Championships



2016 ACT Rowing Championships Boats near Pontoon Weston Park



2020 Canberra Girls Grammar School – 95 Students Row

TRIATHLON, CANOES, DRAGON BOATS, GROUP SWIMMING

2019 Triathlon Tarcoola Reach



2020 Canoes Yarralumla Bay



2017 Vikings Lake Swim Yarralumla Bay



2019 22nd Annual Australian Dragon Boat Championships



PADDLE BOARDING



WINDSURFING AND KITE SURFING

