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Main Roads Consultation
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Dear Main Roads Officers,

**Draft 1258052 Kwinana Freeway Principal Shared Path (PSP)
Canning – Mount Henry Bridge 5% Urban and Landscape Design (ULD)**

Thank you for the opportunity for the Urban Bushland Council WA Inc. (UBC) to present comments in response to the invitation for our member groups to address the issues of relevance.



Our organisation is a voluntary community association of 87 member groups (each with their own local membership from 10-165 individuals) and 101 individual supporter members – all of which have a common interest in the conservation of urban bushland and wetlands.

UBC is an incorporated, not-for-profit organisation registered as a charity.
<https://www.bushlandperth.org.au/>

UBC is the key community organisation in WA providing a public voice on **the need for retention of what remains of our urban bushland and wetlands which is also critical for a healthy and prosperous future.** We advocate to all levels of Government for natural areas protection. We do this with limited resources through the amazing efforts of our 'Friends Groups' and their many volunteers – from all walks of life 'working' to improve and maintain the health of patches of neighbourhood nature – many working in close

PHOTO SOURCE: Google Earth.

Highlighting important local native vegetation between Canning Bridge and Mt Henry Bridge.

collaboration with your department, fellow departments (eg Department of Biodiversity, Conservation and Attractions, Department of Planning, Lands and Heritage) and their local council.

The focussed 'strip' from Canning Bridge to Mt Henry Bridge is a critical ecological linkage that should be enhanced with additional plantings of local native plants to provide habitat for local native birds, riverine species, insects and reptiles.

It is the very important **Bush Forever Site 227 Mount Henry Bushland**. As such it should be managed for nature conservation. Refer Bush Forever 'Keeping the bush in the city' Volume 2 Pages 431-433 <https://www.wa.gov.au/system/files/2021-07/POL-Bush-Forever-Volume-2-Dec2000.pdf> and Volume 1 map Sheet 53, page 161

https://www.wa.gov.au/system/files/2021-08/POL-bush_forever_vol1-Dec2000-maps.pdf.

This linear strip presents a perfect area for providing 'living stepping stones' for native fauna along a local native habitat strip that protect and support Bush Forever Site 227 and extend its natural linkage to other areas.

Advantages:

- More ecologically effective and environmentally sustainable planning and development (Brooker *et al.* 2008);
- Increased migration rates, leading to: maintaining (or increasing) species richness, increased population sizes, a mitigation of inbreeding depression, and facilitating recolonisation following local extinctions (Levins 1970, Hanski 1990, Fischer and Lindenmayer 2007);
- Increased foraging and home range areas (Lambeck 1999);
- Providing cover for escape from predators between patches (Catling *et al.* 2000, Pope *et al.* 2005);
- Providing a mix of habitats at different successional stages (Catling *et al.* 2000, Pope *et al.* 2005);
- Providing alternative refuge from major disturbances (Dunlop and Brown 2008, Pope *et al.* 2005, Diamond 1975, Fischer and Lindenmayer 2007); and
- Providing greenbelts to limit the effects of urbanisation on species and ecological communities (Mason *et al.* 2006, Brooker *et al.* 2008).

EXTRACT: Molloy, S, Wood, J, Hall, S, Wallrodt, S and Whisson G 2009, *South West Regional Ecological Linkages Technical Report*, Western Australian Local Government Association and Department of Environment and Conservation. https://walga.asn.au/getattachment/Policy-Advice-and-Advocacy/Environment/Biodiversity/SWREL_LowRes.pdf?lang=en-AU

We agree that the area referred to does have some beautiful and important natural and cultural areas. These need to be carefully enhanced for the future ecological health of the river as supported by the recent consultative review by the Department of Biodiversity, Conservation and Attractions (DBCA) focussing on the Swan Canning Riverpark Development Control Areas (DCA) <https://www.dbca.wa.gov.au/swan-canning-riverpark/draft-planning-policies-for-localities-along-swan-canning-development-control-area>.

DBCA acknowledges the river is sick and to manage it for the nature, people and recreation into the future they need to take steps now.

This includes to:

- Increase the native vegetation buffers to:
 - filter nutrients from entering water
 - allow for climate change induced water level rise

- provide larger areas of undisturbed habitat for waterbirds (local and migratory).
- Reduce the built environment that:
 - detracts from recreational time with nature
 - reflects the importance that city dwelling Indigenous people can have time in unbuilt nature
 - alters water quality from impeding flow
 - requires ongoing maintenance.
- Reduce the amount of public access to the foreshore because of:
 - disturbance to wildlife
 - erosion
 - poor water quality from silt disturbance and release of stored pollution.
- Move paths away from the foreshore to:
 - increase buffers
 - plan for water level rise due to impacts of climate change.

The Swan River Trust commissioned an extensive community users survey on river values in 2010 which has been guiding management direction of the Swan Canning Riverpark DCA. Users want a healthy river for the future. This 1258052 **Kwinana Freeway Principal Shared Path (PSP)** plan for increased recreational nodes so it does not compromise the health of the river and foreshore needs to be reviewed against the combination of:

- Bush Forever Policy and Program
- Swan Canning Riverpark Development Control Areas
- impacts of climate change and
- health and wellbeing.

Recreational nodes:

- Increased buffers must be the primary goal along the foreshore **not** more recreation access points.
- Having rest points well back from water edge for planned water level rise and non-disturbance of waterbirds.
- Larger areas are an environmental and recreational gift to be protected as undisturbed for birds and animals. Dissecting these larger areas with paths is the worst you can do to kill environmental values. Refer published study on disturbance to birds in Kings Park from all the paths dissecting the bushland. (https://ro.ecu.edu.au/theses_hons/495/).
- Limit built, hard surface by having recreational nodes well away from the foreshore.
- Planted on the foreshore thickly with local native species including *Juncus kraussii*, *Baumea juncea*, *Ficinia nodosa*, *Centella cordifolia*, samphires (*Halosarcia* and *Sarcocornia*), *Suaeda australis* and native celery for environmental services including:
 - Habitat for wildlife
 - Carbon sequestration including 'blue carbon storage'
 - Filtration of nutrients (reducing impact on waterways)
 - Habitat for crab spawning when inundated
 - Reduce erosion and access to the water
 - Withstand brackish water inundation.
- **Design Strategy Safety** is a prominent feature of this plan. It is out of context here and is outweighed by the safety benefits of having dense vegetation.

- At a time when we need to mitigate climate change health impacts it should be a priority to have canopy cover and moderated climate by dense vegetation.
- Pollution control from the freeway needs to be filtered through thick vegetation such as paperbarks (*Melaleuca cuticularis*, *M. preissiana* and *M. raphiophylla*) and Sheoaks (*Casuarina obesa*).
- Revitalise the vegetation with local biodiversity to bring it to life with birds and other fauna. In addition to providing habitat, this makes it a place people want to visit

Under pruning of *Casuarina glauca* trees on the PSP has been detrimental for ecological reasons along the Milyu part of the PSP:

- There is nowhere for waterbirds to feel non-threatened and undisturbed. Bikes, pedestrians and freeway cars are disturbing to all but the hardiest wildlife here. There is no time for foraging as the visibility is so great they balk at every manmade movement.
- The water level of the river is so high now that this newly elevated PSP is still inundated and the pruned *Casuarina obesa* allows water spray to cover users of the PSP who choose to commute to work every day.

Recreational Fixtures:

- Worldwide, lighting has had a negative impact on wildlife. It has caused massive decline in invertebrates that form the bulk of the food chains. Their loss is everyone's loss. Loss of biodiversity of plants has led to a loss of a biodiversity in insects and all wildlife. Refer to State's Dark Sky Position Statement (https://www.wa.gov.au/system/files/2022-01/PS_dark_sky_astrotoursim.pdf). Current and future lighting choices should be assessed for low impact to insects.
- Minimise fixtures and unnatural features especially sculptures. It litters what should be a unique biodiverse, alive, landscape. Fixtures should tell the river stories for all the community including Aboriginal people so we don't make requests to inadvertently destroy what we love for short term, perceived recreational gains.

Canning Bridge Activity Hub

- At present, this location is quite unnatural due to past disturbance that has never been remediated. It should be planted with a diversity of local plants.
- However, this is an area that **fairy wrens** are still recorded due to the non-disturbance and should remain so.



Purple-backed Fairy Wren, Milyu Nature Reserve
[Photo courtesy: Tim Graham-Taylor]

- An open vista does not need to be extensive here but a snippet between vegetation.
- Turf should not be reinstated unless it is Native Saltwater Couch (*Sporobolus virginicus*). All exotic grasses should be eliminated here. As its common name implies *Sporobolus virginicus* tolerates inundation, including of saltwater.
- No mowing of grassed areas should occur as it:
 - Frightens birds from their foraging, resting and/or roosting
 - Provides better foraging for water birds such as herons, spoonbills, ducks and ibis.

Section 5 treatment is expensive and short term. It would be more suitable to replant with sedges for the many benefits they provide and increase the time this area is useable from water inundation.

Promenade

- 1) There is insufficient space here for recreational nodes.
- 2) Any work here should be to move the path back from the river or if insufficient space to raise the path to allow for foreshore vegetation buffering and water level rise.
- 3) Sedges *Juncus kraussii*, *Baumea juncea* and *Ficinia nodosa* need to be reinstated densely here, as the most ideal buffer for sea-spray and water inundation.

Pg 15. This design of a path through the bushland and further clearing around the PSP will cause detriment to biodiversity values and ecosystem services. Minimal disturbance on this larger node needs to be maintained as a sanctuary for small birds, insects and reptiles.

Pg 20, 3) Shows the water at the PSP. The PSP needs to be raised to allow water to go under the path or moved back as close to the road but preferably with a thick buffer of shrubs to reduce pollution from traffic for users.

Pg 21, 13 and 14, Agree this is where the artwork should be, preferably dual signage telling of the importance of the river for environmental and cultural values including Noongar.

Narrow bushland strip between river and road should have minimal incursions to protect environmental values for wildlife.

The Point appears very degraded and dissected by a looping path. This needs to be rehabilitated and paths significantly reduced.

Beach enhancement for habitat and wildlife should be the focus.

Revitalise the Point by:

- reassessing where a path could go that left a fenced off area for water bird use on the foreshore. Signage here would be necessary as people will find a way to access this area. “*Shh! Birds foraging!*” If birds came back here to nest then consider seasonal signs such as at Point Walter spit to stop disturbance and increase chick raising success.
- Leaving a maximum amount of undisturbed area to allow birds not only to visit here but to nest here.

Pg 22 3) Putting limestone here to stabilise the foreshore would not only be short term fix but it would take away an opportunity to replant erosion controlling sedges that would provide foraging habitat for waterbirds and spawning habitat for crabs. See benefits above.

Cockatoo trees:

- Your consideration for these is to be praised as the public want to do what they can to provide habitat for these endangered iconic birds. Our caution would be to liaise with Birdlife WA (wa@birdlife.org.au)



Iconic and ENDNAGERED Carnaby's Cockatoo

[Photo courtesy: Marg Owen OAM]

The public also want to protect foraging, nesting and resting areas for waterbirds which has not been considered in these plans. Can we please consider this? There is nowhere else for these birds to go to nest, roost and/or feed.

- Ecological Function for river and foreshore health and recreational positive experiences
- **Ecological linkages** should be a primary goal of the foreshore for all the benefits it has for the river and foreshore health into the future
- It is wise to have a diversity of plants and trees to bring back ecosystem function. *Casuarina obesa* does cross pollinate with the introduced, suckering **C. glauca* and could be planted when hybrids and **C. glauca* have been controlled. Other trees such as *Melaleuca raphiophylla*, *M. cuticularis*, *M. preissiana* and *Eucalyptus rudis* would provide a different flowering time to provide insects all year round for birds
- Where possible on this forested section of PSP have touching canopy over the path for health benefits to recreational users and biodiversity values.

“Water Sensitive Urban Design” must be the protection of the foreshore with local species. There should be no need for supplementary watering on the foreshore if local salt tolerant plants are used (except in the first two years of establishment).

The area should be replanted with a diversity of suitable local plants wide enough to attract birds, insects and reptiles back.

Your photos tell the story of our neglect of the river and foreshore, where revegetation has been poor. There is now a great opportunity to improve the river health and PSP users enjoyment.

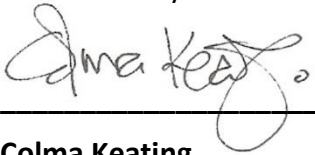
Unfortunately, however, this plan does not consider:

- The poor health of the river that must be remediated.
- That revitalising the ecological function of the river is critical.
- That ecological linkages deliver for both the natural environment, passive recreation and tourism.
- The prediction of more severe storms, higher spring tides, rising water levels and reduced nutrient flushing with reduced rainfall from climate changes.
- The importance of using local species of plants to:
 - stabilise the foreshore

- make the water **safe** to swim in
 - give a “sense of place”.
- The 2010 Swan River Trust survey results which should be guiding management of the rivers.
- The DBCA plan for the DCA to restore river health for ecological health and better recreational experience for the future (recent public review of these plans has just closed).
- How to implement the Kwinana Freeway Foreshore Management Plan 2014.
- The importance of unbuilt vistas and areas in a city environment for people and in particular Aboriginal people.
- What attracts people to use this path:
 - Recreation with a healthy functioning river for waterbirds and other wildlife. We can even bring back fish or perhaps rakali here.
- The environmental, social and economic cost.

The Urban Bushland Council is very happy to bring our knowledgeable members together with DBCA and Main Roads to work on a ecological revitalisation plan along the PSP with you.

Your sincerely



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