From:	noreply@feedback.planningportal.nsw.gov.au on behalf of Planning Portal - Department of Planning and Environment		
To:	DPE PS ePlanning Exhibitions Mailbox		
Subject:	Webform submission from: Activation Precincts SEPP and the Wagga Wagga master plan		
Date:	Tuesday, 15 September 2020 10:05:57 AM		
Attachments:	<u>iohn fleming icg submission-to sap draft master wmawater v1.pdf</u>		

Submitted on Tue, 15/09/2020 - 10:00 Submitted by: Anonymous Submitted values are: Submission Type:I am submitting on behalf of my organisation First Name: John Last Name: Fleming Name Withheld: No Email Suburb/Town & Postcode: Suburb/Town & Postcode: Submission file: john fleming icg submission-to sap draft master wmawater v1.pdf

Submission: WMAwater is making this submission on behalf of John Fleming Holdings in response to the public exhibition of the Wagga Wagga Special Activation Precinct Draft Master Plan. The submission documents five (5) objective concerns that we feel require further consideration within the Wagga Wagga SAP Master Plan.

URL: https://pp.planningportal.nsw.gov.au/WaggaWaggaSAP



NSW Department of Planning, Industry and Environment Locked Bag 5022 Parramatta NSW 2124

120067

11 September 2020

## Attention: Executive Director

Dear Officer

## Re: Wagga Wagga Special Activation Precinct Master Plan

WMAwater is writing this letter to make a submission on behalf of John Fleming Holdings in response to the public exhibition of the Wagga Wagga Special Activation Precinct Draft Master Plan. A review of the Draft Master Plan (Reference 1) and its supporting study reports (References 2-5) has been conducted. In general, we believe that there is a lack of consideration of the impact of future development in SAP footprint on the Gobbagombalin Lagoon (the Lagoon) as an end-of-line receiving aquatic ecosystem of Dukes Creek (References 6 and 7).

The Lagoon is currently used for irrigation with reference to the 500 ML irrigation offtake license and is surrounded by River Red Gum (*Eucalyptus camaldulensis*) woodland on the terrestrial fringes of the Lagoon (Reference 7). The Lagoon is within the Potential High Biodiversity Value Areas and Wagga Wagga Key Fish Habitat (Reference 9). The Lagoon is expected to be restored as an important feature and amenity for the proposed residential growth area currently under investigation (References 6 and 8). Therefore, the Lagoon has ecological, environmental, commercial, and future social significance.

The Lagoon receives inflows from Dukes Creek and most of its upstream catchment is covered by the SAP footprint. The future development in SAP has potential impacts on the Lagoon through the quantity and quality of the stormwater entering the Lagoon, as well as the groundwater connected to the Lagoon. John Fleming Holdings is expecting revised Master Plan and associated stormwater and hydrogeology assessment studies with the consideration of the Lagoon to be conducted before we can fully support the proposal.

Specifically, we request below items to be conducted/solved:

- i. further investigation on the impact of stormwater volumes entering the Lagoon to ensure that the stormwater volumes will not be reduced;
- ii. confirmation on the implementation of "neutral or beneficial effect" requirement on stormwater quality on future development;

#### WMAwater Pty Ltd

DIRECTORS M K Babister, RPEQ R W Dewar E J Askew F L Ling, RPEQ SENIOR ASSOCIATES R Hardwick Jones, RPEQ M E Retallick, RPEQ ASSOCIATES M J J Colegate ABN 14 600 315 053

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- iii. revised hydrogeological assessment with the consideration of the Lagoon as a high potential GDE;
- iv. clarification on the plan of using any groundwater related to and aquafers under the proposed footprint of the SAP and the potential impact on the water quality and quantity in the Lagoon; and
- v. the plan to remediate Dukes Creek to it natural water course to improve the flow volumes entering the Lagoon.

Detailed comments have been attached to this letter.

Yours Sincerely,

Mark Colegate, Senior Principal **WMAwater** 

ABN: 14 600 315 053

John Fleming John Fleming Holdings Pty Ltd

ABN: 41 811 009 172

#### 1. Stormwater Quantity to the Lagoon

The Master Plan has the performance criteria for stormwater flow of "less than a 10% change in the modelled annual runoff from each site and in the aggregate in wet, dry and average rainfall conditions." However, this is not considered to be adequate due to the following reasons:

- Any loss of stormwater volumes is deemed to be detrimental to the Lagoon even under 10% of change, considering the irrigation and ecological demands.
- The detention basins for flood management (detailed in References 3 and 4) have a potential to reduce the flow volumes to equal to or less than the pre-development levels, and rainwater tanks for water reuse (detailed in Reference 3) will have a potential to further reduce the flow volumes leaving the SAP and entering the Lagoon. The joint impact of detention basins and water reuse measures has not been investigated in terms of stormwater quantity.

Consequently, as a stakeholder, John Fleming Holdings requests the impact of stormwater volumes entering the Lagoon to be further investigated and the development should at least ensure that the stormwater volumes will not be reduced to cause any negative impact on the irrigation capability, the Flora and Fauna, and habitat of the local populations and ecological communities in the Lagoon detailed in Appendix B of the Ecological Report (Reference 7).

#### 2. Stormwater Quality to the Lagoon

The Master Plan has set "neutral or beneficial effect" on stormwater quality requirement, which is consistent with the WaterNSW Standard (Reference 10) and provides assurance that the water quality after development will not cause negative impacts on the environment and ecosystem in Duke Creek and the Lagoon. However, the SAP Flooding and Water Quality Final Adopted Scenario Report (Reference 3) presents MUSIC modelling and treatment facilities in accordance with a different standard, which requires the post-development meeting the certain reduction targets as listed in Table 1.

Pollutant	% Post Development Average Annual Load Reduction
Gross pollutants	90
Total Suspended Solids	85
Total Phosphorous	65
Total Nitrogen	45

Table 1: Potential Pollution Reduction Targets.

The discrepancy between the Master Plan and the Flooding and Water Quality Report needs to be clarified. Meeting targets listed in Table 1 has no guarantee that the water quality after development will has no negative impacts on the Lagoon. John Fleming Holdings would expect that the neutral or beneficial effect on water quality can be finally implemented in the next stage, i.e., Delivery Plan.

## 3. Groundwater Connected to the Lagoon

The Desktop Hydrogeology Assessment (Reference 5) found that "there are no aquatic GDE's (ecosystems that rely on the surface expression of groundwater) within the Wagga Wagga SAP." This is an invalid statement when the Lagoon is taken into consideration. Lagoon is classified as a High Potential Aquatic Groundwater Dependent Ecosystem (GDE) according to Bureau of Meteorology's GDEs Atlas (References 11 and 12), as shown in Figure 1.

Consequently, the groundwater management in SAP (upstream) can have potential impacts on the Lagoon (downstream). In sake of the Lagoon, the following need to be conducted/clarified:

- revised hydrogeological assessment with the consideration of the Lagoon as a high potential GDE; and
- plan of using any groundwater related to and aquafers under the proposed footprint of the SAP and the potential impact on the water quality and quantity in the Lagoon.



Figure 1: Aquatic GDEs (Refence 12)

# 4. Health of Dukes Creek

The Master Plan has well defined setback requirements for the riparian corridors, which is important for managing the health of Dukes creek and the Lagoon.

From another perspective, according to the observation by John Fleming Holdings, the original flow of Dukes creek was altered due to the construction of the approaches of the Gobbagombalin Bridge around 2006, as illustrated in Figure 2. Most of the soil for the approaches was taken from the creek bed of Dukes Creek leaving a massive hole, as shown in Figure 3. Based on knowledge of farming the land for the last 30 years, the Lagoon water levels have been adversely affected since the construction of the Gobbagombalin Bridge.

John Fleming Holdings believe that it should be part of the SAP planning process that Dukes creek should be remediated to it natural water course as much as possible to improve the flow volume entering the Lagoon. Therefore, we suggest this issue to be further elaborated in the Master Plan.



Figure 2: The Original waterway (red) and Diverted Roadside Drain (blue) of Dukes Creek (NSW Six Maps).



Figure 3: Hole Left from Gobbagombalin Bridge Approach Works (Location 3 in Figure 2).

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