

**Subject: EES comments on Planning Proposal to amend Hawkesbury Local Environmental Plan 2012 for Jacaranda, Glossodia – consultation under S3.34(2)(d) of the EP&A Act**

**BIODIVERSITY CERTIFICATION ASSESSMENT REPORT AND STRATEGY**

Item	Issue	Applicants Comments	Action Required
1.	<p><u>4.6 Indirect Impacts</u>                      The BCAR&amp;S notes “indirect impacts have been considered in accordance with the BCAM and have been determined to be negligible on the basis that all direct impacts have been assessed on the assumption of complete loss of all biodiversity values including for Asset Protection Zones (APZs)” (page xii , section 4.6, page 48). It indicates the APZs will provide a buffer between the residential lands and the adjacent conservation area, and mitigate any indirect impacts such as increased weeds, storm water run-off (page xii).</p> <p>The PPR and appendices show active recreation spaces, detention basins, pathways are proposed to be in the Village Green in close proximity to the Currency Creek Biobank site. EES previously advised the BCAR&amp;S should assess whether the proposed active recreation spaces, stormwater detention basins, creek-side trails, recycled water irrigation areas, and are likely to have any potential direct or indirect impacts on the conservation areas/biodiversity values.</p>	<p>Direct impacts associated with the proposed development, including the construction of ancillary infrastructure has been included and assessed as part of the footprint. Indirect Impacts are considered negligible given the quality metrics established for any stormwater. All stormwater must meet: <i>‘The minimum requirement shall be that the average annual pollutant load discharged from the developed site shall be no greater than for existing conditions.’</i></p>	None required.
2.	<p>The BCAR&amp;S states “Celestino Pty Ltd will prepare and implement a construction Environment Management Plan for vegetation clearing to guide the development outlined in this biocertification assessment and ensure that all direct and indirect impacts (e.g. APZs, utilities, access, stormwater runoff) are contained within the development footprint and appropriate mitigation measures are put in place to minimise any indirect impacts to threatened fauna (page xiii). Clarification is required as to whether the proposed fauna preclearance survey protocol and dewatering plan applies to all the Jacaranda site and all protected native fauna species and not just threatened species. Section 6.5 of the BCAR&amp;S implies the CEMP specifically will address the management of land proposed for conservation measures (page 69).</p>	This applies to the entire Jacaranda site.	None required.
3.	<p>EES previously sought details on where it is proposed to irrigate with the recycled water, whether it will be in proximity to the biobank sites and whether it is proposed to irrigate the Village Green with it as the Currency Creek biobank site adjoins and is located down slope of the Village Green. The application and use of recycled water at the site should not impact the biobank sites.</p> <p>The current BCAR&amp;S notes recycled water could be used for irrigation of ovals and open space and the water re-entering the environment would be of a high quality and very low nutrient load and as such no indirect impacts are expected</p>	<p>Subject to negotiation with Council recycled water could be used for irrigation of ovals and open space. The recycled water system will not impact the biobank sites as it will be accommodated in the road reserve alongside the sewerage and potable water infrastructure. The water re-entering the environment would be of a high quality and very low nutrient load. As such, no indirect impacts are expected to occur.</p>	None required.

	<p>to occur (section 4.6, page 48). The DCP also includes a control that recycled water may be used in public parkland for irrigation of lawns and gardens provided there is no impact to biodiversity areas (see section 2.3.5 – Control C.5 in the DCP). In addition to not changing the quality of water that enters the biobank sites, the application of recycled water for irrigation on adjoining ovals and open space should not impact the biobank sites by changing the quantity of water/runoff/seepage that enters the biobank sites.</p> <p>EES previously advised the BCAR&amp;S should also address, whether:</p> <ul style="list-style-type: none"> <li>• companion animals will be permitted in the Village Green as the Village Green adjoins the Currency Creek biobank site. If companion animals are to be permitted, the BCAR&amp;S should assess the potential impacts of this on biodiversity values in the Biobank site as a walking trail is proposed to be located immediately adjacent to the biobank site at some locations (see Figure 5 of BCAR&amp;S, page 12). The current BCAR&amp;S only states that any indirect impacts likely to occur as a result of the trail running adjacent to the creek would be managed through the implementation of the Biobank Agreement and the Vegetation Management Plan (section 4.6, page 49) but it has not specifically addressed the impact of dogs of leash near the biobank site. EES notes the Main Recreational Attractions and Accessibility Plan (see above) in Appendix V of the PPR (page 911 of 997) shows a potential dog off leash area is proposed to be located in the Village Green which adjoins the Biobank site along Currency Creek.</li> </ul>	<p>Any indirect impacts likely to occur as a result of the trail running adjacent to the creek would be managed through the implementation of the BioBank Agreement and the Vegetation Management Plan.</p>	
<p>4.</p>	<ul style="list-style-type: none"> <li>• fertiliser/nutrients from the active recreation space areas and irrigation areas can runoff and impact the biobank sites. The current BCAR&amp;S notes recycled water could be used for irrigation of ovals and open space and the water re-entering the environment would be of a high quality and very low nutrient load and as such no indirect impacts are expected to occur (section 4.6, page 48). It is unclear if fertiliser will be applied to the open space area/ovals (as part of managing/maintaining these areas) which are in close proximity to the Currency Creek Biobank site and whether fertiliser /nutrient runoff will impact the biobank site.</li> </ul>	<p>As we can not commit to if and what type of fertilizer may be used in future, any response would be purely assumed.</p>	<p>None required.</p>
<p>5.</p>	<ul style="list-style-type: none"> <li>• the detention basins require outlets to be constructed either near, or within the Biobank site, and if so, whether the outlets require the clearing or disturbance of any native vegetation in the Biobank site etc</li> </ul>	<p>Potential detrimental impacts to vegetation within the biobanking site will be managed via the implementation of a comprehensive CEMP.</p> <p>Post construction/Operational phase impacts will be mitigated via the in perpetuity management of the Biobank sites.</p>	<p>None required.</p>

6.	EES recommended the BCAR&S should include details including a scaled plan on where the proposed irrigation areas, detention basin outlets etc are to be in relation to the Biobank sites but this information has not been provided. if it is not possible to provide this information at this stage, then it should be ensured that the irrigation areas and these structures don't lead to any direct or indirect impacts on the biobank sites.	This information is not yet known and will be determined with Council at DA stage.	None required.
7.	<p><u>Impacts on Red Flagged Areas</u></p> <p>It is noted Section 5.1 of the BCAR&amp;S has been amended as the previous BCAR&amp;S stated "the development will not impact any native vegetation within the riparian buffer" (page 46 of previous BCAR&amp;S) but it now states "the development will impact 0.002 ha of native within the riparian buffer" (page 52). EES previously advised it is unclear whether the pedestrian/cycle path crossings of the creek, or any WSUD/bio-basin outlets are likely to impact native within the riparian buffer as</p> <ul style="list-style-type: none"> <li>• the PPR appears to show that two pedestrian and cycle paths crossings are proposed to be located within the riparian corridor</li> <li>• the PPR shows WSUD/ bio basins, active recreation spaces are in close proximity to the riparian buffer along Currency Creek and it is unclear if they are likely to impact native riparian vegetation.</li> </ul>	The preliminary design work to date indicates that there is a potential impact within this area for stormwater infrastructure. Detailed design has not yet occurred. Any impact to retained lands will be required to go through future development assessment in accordance with the legislation.	None required.
8.	<p>Section 2.4.3.2 of the BCAR&amp;S states "no works are proposed for Currency Creek or any lands that form part of the riparian buffer" (page 57) but this does not appear to be consistent with:</p> <ul style="list-style-type: none"> <li>• a key conservation recommendation in the PPR that detention basins, cycleways and footpaths are considered appropriate for vegetated riparian zones provided they are offset (Section 7.1.4).</li> <li>• the proposed DCP controls in Section 2.2.5 (Riparian Corridor).</li> </ul> <p>This inconsistency between the BCAR&amp;S, PPR and the DCP needs to be addressed.</p>	The preliminary design work to date indicates that there is a potential impact within this area for stormwater infrastructure. Detailed design has not yet occurred. As such we maintain these statements are appropriate.	None required.
9.	Section 2.4.4 of the BCAR&S refers to "the conservation or retention of 4.82ha of vegetation in the riparian buffer" but it also states "of the area to be retained 2.26 ha will be conserved and managed in-perpetuity as part of a Biobank Agreement site. The remaining 2.93 ha will be retained and managed under a VMP" (page 58) but these two areas of 2.26 ha and 2.93 ha add up to 5.19 ha.	Noted.	We will review and update the figures accordingly.