

For the attention of Catriona Shirley, and others associated with the planning authority, regarding the proposal identified as SSD-76397489 Canopy Warehousing Estate.

Thankyou for the opportunity to comment on this proposal. I am motivated to do so by my belief that our collective wellbeing is linked to the overall health of the environment. I am writing as someone with occupational experience with botany.

I am concerned that the consent authority may be incapable of adequately assessing the biodiversity impacts of this proposal, because the BDAR submitted by the proponent fails to meet some of the minimum requirements. This is with reference to the BDAR cited as:

“Biosis 2025. Canopy Estate Biodiversity Development Assessment Report. Report for Ethos Urban on behalf of FPI Developments NSW Pty Limited. Authors: Heenan C, Guiliano J, Gray R. Biosis Pty Ltd., Sydney, NSW. Project no. 40675.”

To provide a succinct review of my concerns, I have annotated an excerpt of Table 24, ‘minimum information requirements’, from Appendix K of the *Biodiversity Assessment Method Order 2020* (BAM).

Thank you for considering my submission, feel free to contact me through the email I used for submission to discuss this further.

Kind Regards  
Samuel

A BDAR, written by Biosis for Ethos Urban, dated 22/9/25, was reviewed with this table on 21/10/25, Red highlighting indicates one or more of the following issues; an absence of the information, or clear errors, or dubious factuality. This is occasionally elaborated on in a pink-outlined blue-text window.

**Table 24 Minimum information requirements for the Biodiversity Development Assessment Report and the Biodiversity Certification Assessment Report – Stage 1: Biodiversity assessment**

Report section	BAM ref.	Information	Maps & tables (in document)	Data (to be supplied)
Introduction	Chapters 2 and 3	<b>INFORMATION</b> Introduction to the biodiversity assessment including: <ul style="list-style-type: none"> <li><input type="checkbox"/> brief description of the proposal</li> <li><input type="checkbox"/> identification of subject land<sup>1</sup> boundary, including:               <ul style="list-style-type: none"> <li><input type="checkbox"/> operational footprint (if BDAR)</li> <li><input type="checkbox"/> construction footprint indicating clearing associated with temporary/ancillary construction facilities and infrastructure (if BDAR)</li> <li><input type="checkbox"/> land proposed for biodiversity certification (if BCAR)</li> </ul> </li> <li><input type="checkbox"/> general description of the subject land</li> <li><input type="checkbox"/> sources of information used in the assessment, including reports and spatial data</li> </ul>		
		<b>MAPS and TABLES (in document)</b> <input type="checkbox"/> Map of the subject land boundary showing the final proposal footprint, including the construction footprint for any clearing associated with temporary/ancillary construction facilities and infrastructure (if BDAR)		
		<b>DATA (to be supplied) – N/A</b>		
Landscape context	Sections 3.1 and 3.2, Appendix E	<b>INFORMATION</b> Identification of site context components and landscape features, including: <ul style="list-style-type: none"> <li><input type="checkbox"/> general description of subject land topographic and hydrological setting, geology and soils</li> <li><input type="checkbox"/> percent native vegetation cover in the assessment area (as described in BAM Section 3.2)</li> <li><input type="checkbox"/> IBRA bioregions and subregions (as described in BAM Subsection 3.1.3(2.))</li> <li><input type="checkbox"/> rivers and streams classified according to stream order (as described in BAM Subsection 3.1.3(3.) and Appendix E)</li> <li><input type="checkbox"/> wetlands within, adjacent to and downstream of the site (as described in BAM Subsection 3.1.3(3.))</li> <li><input type="checkbox"/> connectivity of different areas of habitat (as described in BAM Subsection 3.1.3(5–6.))</li> <li><input type="checkbox"/> karst, caves, crevices, cliffs, rocks and other geological features of significance and for vegetation clearing proposals, soil hazard features (as described in BAM Subsections 3.1.3(7.) and 3.1.3(12.))</li> <li><input type="checkbox"/> areas of outstanding biodiversity value occurring on the subject land and assessment area (as described in BAM Subsection 3.1.3(8–9.))</li> <li><input type="checkbox"/> any additional landscape features identified in any SEARs for the proposal</li> </ul>		

<sup>1</sup> As defined in the BAM.

Biodiversity Assessment Method

Report section	BAM ref.	Information	Maps & tables (in document)	Data (to be supplied)
		<input type="checkbox"/> NSW (Mitchell) landscape on which the subject land occurs		
		<b>MAPS and TABLES (in document)</b> <input type="checkbox"/> Site Map <ul style="list-style-type: none"> <li><input type="checkbox"/> Boundary of subject land</li> <li><input type="checkbox"/> Cadastre of subject land</li> <li><input type="checkbox"/> Landscape features identified in BAM Subsection 3.1.3</li> </ul> <input type="checkbox"/> Location Map <ul style="list-style-type: none"> <li><input type="checkbox"/> Digital aerial photography at 1:1,000 scale or finer</li> <li><input type="checkbox"/> Boundary of subject land</li> <li><input type="checkbox"/> Assessment area, (i.e. the subject land and either 1500 m buffer area or 500 m buffer for linear development)</li> <li><input type="checkbox"/> Landscape features identified in BAM Subsection 3.1.3</li> <li><input type="checkbox"/> Additional detail (e.g. local government area boundaries) relevant at this scale</li> </ul> Landscape features identified in BAM Subsection 3.1.3 and to be shown on the Site Map and/or Location map include: <ul style="list-style-type: none"> <li><input type="checkbox"/> IBRA bioregions and subregions</li> <li><input type="checkbox"/> rivers, streams and estuaries</li> <li><input type="checkbox"/> wetlands and important wetlands</li> <li><input type="checkbox"/> connectivity of different areas of habitat</li> <li><input type="checkbox"/> karst, caves, crevices, cliffs, rocks and other geological features of significance and if required, soil hazard features</li> <li><input type="checkbox"/> areas of outstanding biodiversity value occurring on the subject land and assessment area</li> <li><input type="checkbox"/> any additional landscape features identified in any SEARs for the proposal</li> <li><input type="checkbox"/> NSW (Mitchell) landscape on which the subject land occurs</li> </ul>		
		<b>DATA (to be supplied)</b> <input type="checkbox"/> All report maps as separate jpeg files Individual digital shape files of: <ul style="list-style-type: none"> <li><input type="checkbox"/> subject land boundary</li> <li><input type="checkbox"/> assessment area (i.e. subject land and 1500 m buffer area) boundary</li> <li><input type="checkbox"/> cadastral boundary of subject land</li> <li><input type="checkbox"/> areas of native vegetation cover</li> <li><input type="checkbox"/> landscape features</li> </ul>		

Although it is stated on page 6 that aerial photography at this scale is provided, this is not present within the BDAR or within the attachments at <https://www.planningportal.nsw.gov.au/major-projects/projects/canopy-warehousing-estate> (on the 21/10).

The finest aerial photography provided is 1:5000, this is 5-fold more coarse than the minimum requirement.

When comparing the imagery in the BDAR to google map imagery, there is native woody vegetation on-site which is not apparent in the BDAR imagery. For example a stag

Report section	BAM ref.	Information	Maps & tables (in document)	Data (to be supplied)
Native vegetation	Chapter 4, Appendix A and Appendix H	<b>INFORMATION</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Identify native vegetation extent within the subject land, including cleared areas and evidence to support differences between mapped vegetation extent and aerial imagery (as described in BAM Section 4.1(1–3.) and Subsection 4.1.1)</li> <li><input type="checkbox"/> Provide justification for all parts of the subject land that do not contain native vegetation (as described in BAM Subsection 4.1.2)</li> <li><input type="checkbox"/> Review of existing information on native vegetation including references to previous vegetation maps of the subject land and assessment area (described in BAM Section 4.1(3.) and Subsection 4.1.1)</li> <li><input type="checkbox"/> Describe the systematic field-based floristic vegetation survey undertaken in accordance with BAM Section 4.2</li> <li><input type="checkbox"/> Where relevant, describe the use of more appropriate local data, provide reasons that support the use of more appropriate local data and include the written confirmation from the decision-maker that they support the use of more appropriate local data (as described in BAM Subsection 1.4.2 and Appendix A)</li> </ul> <p>For each PCT within the subject land, describe:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> vegetation class</li> <li><input type="checkbox"/> extent (ha) within subject land</li> <li><input type="checkbox"/> evidence used to identify a PCT including any analyses undertaken, references/sources, existing vegetation maps (BAM Section 4.2(1–3.))</li> <li><input type="checkbox"/> plant species relied upon for identification of the PCT and relative abundance of each species</li> <li><input type="checkbox"/> if relevant, TEC status including evidence used to determine vegetation is the TEC (BAM Subsection 4.2.2(1–2.))</li> <li><input type="checkbox"/> estimate of percent cleared value of PCT (BAM Subsection 4.2.1(5.))</li> </ul> <p>Describe the vegetation integrity assessment of the subject land, including:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> identification and mapping of vegetation zones (as described in BAM Subsection 4.3.1)</li> <li><input type="checkbox"/> assessment of patch size (as described in BAM Subsection 4.3.2)</li> <li><input type="checkbox"/> survey effort (i.e. number of vegetation integrity survey plots) as described in BAM Subsection 4.3.4(1–2.)</li> <li><input type="checkbox"/> use of relevant benchmark data from BioNet Vegetation Classification (as described in BAM Subsection 4.3.3(5.))</li> </ul> <p>Where use of more appropriate local benchmark data is proposed (as described in BAM Subsection 1.4.2, BAM Subsection 4.3.3(5.) and BAM Appendix A):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> identify the PCT or vegetation class for which local benchmark data will be applied</li> <li><input type="checkbox"/> identify published sources of local benchmark data (if benchmarks obtained from published sources)</li> <li><input type="checkbox"/> describe methods of local benchmark data collection (if reference plots used to determine local benchmark data)</li> <li><input type="checkbox"/> provide justification for use of local data rather than BioNet Vegetation Classification benchmark values</li> <li><input type="checkbox"/> provide written confirmation from the decision-maker that they support the use of local benchmark data</li> </ul>		

Areas which the authors knew contained native vegetation (as indicated in appendix plot data), were characterised as "exotic" (2.98ha) and "exotic grassland" (36.74ha).

Areas wrongly labelled "not native" in this way comprised the vast majority of the 46.16ha site. BAM section 4.1 makes it extremely clear that all areas containing native vegetation must be assigned a native PCT, regardless of co-occurring exotic vegetation.

Report section	BAM ref.	Information	Maps & tables (in document)	Data (to be supplied)
Vegetation integrity survey plots were not all established or assessed in line with the requirements of subsections 4.3.4 (4. 5. 6. 11.)		<b>MAPS and TABLES (in document)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Map of native vegetation extent within the subject land at scale not greater than 1:10,000 including identification of cleared areas (as described in BAM Section 4.1(1–3.)) and all parts of the subject land that do not contain native vegetation (BAM Subsection 4.1.2)</li> <li><input type="checkbox"/> Map of PCTs within the subject land (as described in BAM Section 4.2(1.))</li> <li><input type="checkbox"/> Map of vegetation zones within the subject land (as described in BAM Subsection 4.3.1)</li> <li><input type="checkbox"/> Map the location of floristic vegetation survey plots and vegetation integrity survey plots relative to PCTs boundaries</li> <li><input type="checkbox"/> Map of TEC distribution on the subject land and table of TEC listing, status and area (ha)</li> <li><input type="checkbox"/> Map of patch size locations for each native vegetation zone and table of patch size areas (as described in BAM Subsection 4.3.2)</li> <li><input type="checkbox"/> Table of current vegetation integrity scores for each vegetation zone within the site and including: <ul style="list-style-type: none"> <li><input type="checkbox"/> composition condition score</li> <li><input type="checkbox"/> structure condition score</li> <li><input type="checkbox"/> function condition score</li> <li><input type="checkbox"/> presence of hollow bearing trees</li> </ul> </li> </ul> <b>DATA (to be supplied)</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> All report maps as separate jpeg files</li> <li><input type="checkbox"/> Plot field data (MS Excel format)</li> <li><input type="checkbox"/> Plot field data sheets</li> <li><input type="checkbox"/> Digital shape files of: <ul style="list-style-type: none"> <li><input type="checkbox"/> PCT boundaries within subject land</li> <li><input type="checkbox"/> TEC boundaries within subject land</li> <li><input type="checkbox"/> vegetation zone boundaries within subject land</li> <li><input type="checkbox"/> floristic vegetation survey and vegetation integrity survey plots</li> </ul> </li> </ul>		
For example (under 4.3.4 (11.)): There are 7 locations of hollow-bearing trees identified in Figure 5. These appear to be within 6 different zones/areas.				
Each zone containing any hollow bearing trees is required to have this feature included in at least one plot. Of the multiple areas this applies to, only one zone has a VI plot with a hollow-tree in it. (Table A 6).				
It is wrongly indicated in Table 12 that two zones have no hollow bearing trees: those zones actually do have this feature (figure 5.), but due to the plot locations, this wasn't recorded				
Threatened	Chapter 5	<b>INFORMATION</b> <ul style="list-style-type: none"> <li><input type="checkbox"/> Identify native vegetation extent within the subject land, including cleared areas and evidence to support differences between mapped vegetation extent and aerial imagery (as described in BAM Section 4.1(1–3.) and Subsection 4.1.1)</li> <li><input type="checkbox"/> Provide justification for all parts of the subject land that do not contain native vegetation (as described in BAM Subsection 4.1.2)</li> <li><input type="checkbox"/> Review of existing information on native vegetation including references to previous vegetation maps of the subject land and assessment area (described in BAM Section 4.1(3.) and Subsection 4.1.1)</li> <li><input type="checkbox"/> Describe the systematic field-based floristic vegetation survey undertaken in accordance with BAM Section 4.2</li> <li><input type="checkbox"/> Where relevant, describe the use of more appropriate local data, provide reasons that support the use of more appropriate local data and include the written confirmation from the decision-maker that they support the use of more appropriate local data (as described in BAM Subsection 1.4.2 and Appendix A)</li> </ul> <p>For each PCT within the subject land, describe:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> vegetation class</li> <li><input type="checkbox"/> extent (ha) within subject land</li> <li><input type="checkbox"/> evidence used to identify a PCT including any analyses undertaken, references/sources, existing vegetation maps (BAM Section 4.2(1–3.))</li> <li><input type="checkbox"/> plant species relied upon for identification of the PCT and relative abundance of each species</li> <li><input type="checkbox"/> if relevant, TEC status including evidence used to determine vegetation is the TEC (BAM Subsection 4.2.2(1–2.))</li> <li><input type="checkbox"/> estimate of percent cleared value of PCT (BAM Subsection 4.2.1(5.))</li> </ul> <p>Describe the vegetation integrity assessment of the subject land, including:</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> identification and mapping of vegetation zones (as described in BAM Subsection 4.3.1)</li> <li><input type="checkbox"/> assessment of patch size (as described in BAM Subsection 4.3.2)</li> <li><input type="checkbox"/> survey effort (i.e. number of vegetation integrity survey plots) as described in BAM Subsection 4.3.4(1–2.)</li> <li><input type="checkbox"/> use of relevant benchmark data from BioNet Vegetation Classification (as described in BAM Subsection 4.3.3(5.))</li> </ul> <p>Where use of more appropriate local benchmark data is proposed (as described in BAM Subsection 1.4.2, BAM Subsection 4.3.3(5.) and BAM Appendix A):</p> <ul style="list-style-type: none"> <li><input type="checkbox"/> identify the PCT or vegetation class for which local benchmark data will be applied</li> <li><input type="checkbox"/> identify published sources of local benchmark data (if benchmarks obtained from published sources)</li> <li><input type="checkbox"/> describe methods of local benchmark data collection (if reference plots used to determine local benchmark data)</li> <li><input type="checkbox"/> provide justification for use of local data rather than BioNet Vegetation Classification benchmark values</li> <li><input type="checkbox"/> provide written confirmation from the decision-maker that they support the use of local benchmark data</li> </ul>		
The structure data for PCT 3975 does not match the photographs of PCT 3975 supplied, which show a greater % cover of grasses and grass-like plants than 11.2%				
The BAM plot B03, which was the only plot conducted for PCT 3975, is located on the NW corner of a dam on Redmayne Rd. From Google Streetview, this corner contains a far lower proportion of wetland plants (Phragmites australis and/or Typha orientalis), when compared to the NE corner of that dam. The BAM plot may not be in a representative location.				
				<p>I have concerns about the accuracy of the composition component of the floristic data. The grand total number of native species recorded in the appendix, 29, is unusually low in this particular site/surveying context.</p> <p>Further, numerous species from these PCT's which typically appear in degraded agro-industrial sites in Sydney are absent. I believe a portion of the following are very likely to be present within the VI plots:</p> <p>Oplismenus aemulus; Oxalis perennans; Phragmites australis, Wahlenbergia sp; Lobelia purpurascens; Centella asiatica; Commelina cyanea; Geranium sp; Cotula australis; Hydrocotyle sp; Eragrostis leptostachya; Carex sp; Alternanthera denticulata; Causonis clematidea.</p> <p>This concern is largely speculative, but not entirely so. One of the above species (Phragmites australis) appears to be visible (with inflorescence) in the foreground of photo 6, on page 23. The speculative aspect of this concern could be tested through site observation.</p>



Extra note, from Google maps, the BAM03 plot (pct3975) is located on the NW corner of the dam, which appears to be much more heavily disturbed from dam building earthworks than the NE corner:





If the missing species indicated in the BDAR (*Azolla* and *Phragmites*), are added to the BAM-c case, at 1 and 10% cover respectively, this takes the VI score above the threshold:

Zone composition data

RECALCULATE

OK

Composition condition score: 44.1

Calculation results

Item	Tree	Shrub	Grass & grass like	Forb	Fern	Other
Benchmark	1	2	5	5	1	0
Future mean ( $\bar{x}$ ) *	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="4"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="0"/>
Unweighted composition score ( $UCS_i$ )	0	0	94.9	8.6	100	0
Weighted composition score ( $WCS_i$ )	0	0	33.9	3.1	7.1	0
Dynamic weighting ( $w_i$ )	0.07	0.14	0.36	0.36	0.07	0

0

0.13

44.1

10.4

...

21.4

21.4

21.4

Zone structure data

RECALCULATE

OK

Structure condition score: 10.4

Calculation results

Item	Tree	Shrub	Grass & grass like	Forb	Fern	Other
Benchmark	0	0	102	2	0	0
Future mean ( $\bar{x}$ ) *	<input type="text" value="0"/>	<input type="text" value="0"/>	<input type="text" value="21.2"/>	<input type="text" value="1"/>	<input type="text" value="1"/>	<input type="text" value="0"/>
Unweighted structure score ( $USS_i$ )	0	0	9.4	59.1	0	0
Weighted structure score ( $WSS_i$ )	0	0	9.3	1.1	0	0
Dynamic weighting ( $w_i$ )	0	0	0.98	0.02	0	0

0.13

44.1

10.4

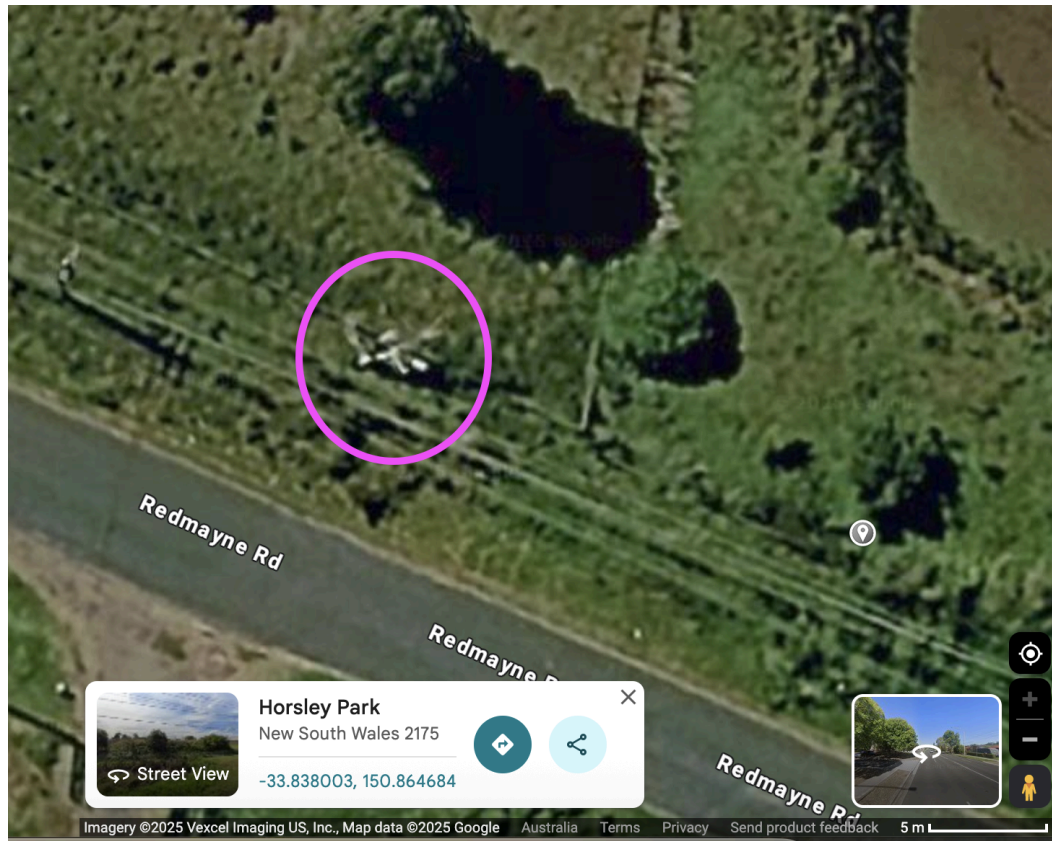
...

21.4

21.4

21.4

With reference to the scale detail required, the following example is a stag of what looks like a Red-gum on Google Maps and streetview







Referred to in the note on the map scale needed:





