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PARRAMATTA NSW 2150

25 March 2025

Subject: CPHR Advice - Elf Mushroom Farm and Substrate Plant - Renewal and relocation of processing plant (MP08_0255-Mod-4) (Hawkesbury City)

Dear Patrick,

Thank you for your e-mail received on 3 March 2025 requesting advice on the modification application for the above project from the Biodiversity, Conservation and Science (BCS) Group of the NSW Department of Climate Change, Energy, the Environment and Water (DCCEEW). Please note on 20 January 2025, BCS became the Conservation Programs, Heritage and Regulation (CPHR) Group.

CPHR has reviewed the *Mushroom Substrate Plant Project Modification No 4 Modification Report* (Perram and Partners, January 2025) (Modification Report) and relevant technical reports and provides detailed flooding and biodiversity advice at **Attachment A**.

In summary, it is CPHR's view that the appropriateness of the development for the site has not been appropriately considered. The proposal is not consistent with *Hawkesbury City Council's Schedule of Flood Related Development Controls* (July 2021) nor the principles of the [Flood Risk Management Manual \(2023\)](#). The proposed modification is a direct expansion of a low flood island onto the floodplain and would triple the volume of filling on the floodplain compared to what was proposed for the original development.

Further, the Biodiversity Development Assessment Report (BDAR) has not adequately addressed all relevant requirements of the *Biodiversity Conservation Act 2016* and the [Biodiversity Assessment Method 2020](#), including how the extent of proposed fill has reasonably avoided or minimised impacts on the western tree corridor.

CPHR recommends the proposed modification is substantially revised or reconsidered.

If you have any further questions about this issue, please contact Liz Peterson, Senior Conservation Planning Officer at elizabeth.peterson@environment.nsw.gov.au.

Sincerely,



Louisa Clark
Director, Greater Sydney Branch
Regional Delivery
Conservation Programs, Heritage and Regulation

CPHR advice - Elf Mushroom Farm and Substrate Plant - Renewal and relocation of processing plant (MP08_0255-Mod-4) (Hawkesbury City)

Flooding

Documents Reviewed

CPHR has reviewed the following documents in preparing its flooding advice:

- *Mushroom Substrate Plant Project Modification No 4 Modification Report* (Perram and Partners, January 2025)
- Appendix G - Letter from GRC Hydro titled *Earthworks at 108 Mulgrave Road NSW 2756* (13 January 2025) including:
 - Letter from GRC Hydro titled *Earthworks at 108 Mulgrave Road NSW 2050* (12 February 2024), and
 - Letter from WMAwater titled *Flood Impact Assessment – Mulgrave Road Mulgrave* (6 August 2010).

The following studies are also considered relevant:

- *Hawkesbury-Nepean River Flood Study 2024* for the NSW Reconstruction Authority (the flood study), and
- *Hawkesbury Floodplain Risk Management Study and Plan 2025* (HFRMSP) (prepared by WMAwater for Hawkesbury City Council).

Key Assessment Issues

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| 1. | Flood risk has not been duly considered | <p>CPHR considers the reporting is inadequate with respect to consideration of flood risk and the appropriateness of the proposed modification in several regards. The full range of flooding must be considered, up to and including the Probable Maximum Flood (PMF).</p> <p>The existing development is on a low flood island, which presents the most severe form of residual flood risk and is considered a key constraint in land-use planning for flooding. Site occupants who do not evacuate in time may drown in rising floodwaters. In the 1% Annual Exceedance Probability (AEP) flood, the site of the existing development is already very hazardous with a hazard category of H4. Therefore, the existing development may already be exposed to an unacceptable level of flood risk.</p> <p>The proposed modification would increase development intensity into a highly active part of the floodplain, including high hazard and likely floodway. Mapping from the flood study indicates that the western portion of fill where new buildings are proposed is in an area of H5-H6 hazard. Therefore, that part of the proposal would not be permissible under Hawkesbury City Council's Schedule of Flood Related Development Controls (the controls).</p> <p>The depth of proposed filling, averaging 4 m for the modification, is also more than the maximum of 1 m permitted under the controls. Furthermore, the extent of floodways has not been adequately considered. It is likely that a floodway is also present across this part of the site. Mapping from the flood study should be considered</p> |
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| | | <p>together with an understanding of the model resolution and limitations.</p> <p>The western area of fill, including the new tunnels, is proposed to be raised to 16 m Australian Height Datum (AHD), which would not allow buildings to be at the required flood planning level of 17.3 m AHD (the 1% AEP flood level). This expansion would significantly increase flood exposure at the site and therefore flood risk.</p> <p>The proposed eastern fill area would create higher ground to create a storage area with better flood immunity. This would present a reasonable response to the flood constraints at the site. This area is already elevated and is located away from flood storage and floodways in the 1% AEP flood. This component of the proposed modification may reduce flood risk for the existing development. Consideration may be given to additional filling to provide freeboard to the 1% AEP flood level for the proposed eastern fill area.</p> <p>Recommended actions:</p> <ul style="list-style-type: none"> • Consider Flood Risk Management Guideline LU01 Flood Impact and Risk Assessment and substantially revise or reconsider the proposed modification in consideration of flood risk. • The Modification Report should indicate the increase in staff associated with the proposed modification. • Consider freeboard to the 1% AEP flood level for the proposed eastern fill area. |
| | <i>Extent and Timing</i> | Prior to determination |
| 2. | Climate change | <p>Large increases in flood levels along the Hawkesbury-Nepean River are predicted to occur with climate change. The HFRMSP indicates that the historical 1% AEP flood level of 17.3 m AHD could increase to over 19 m AHD by 2060 and continue rising to near 21 m AHD by 2090.</p> <p>Recommended actions:</p> <ul style="list-style-type: none"> • Consider the impact of climate change on the proposed development. • Consider the feasibility of raising the eastern fill platform where the storage area is proposed. |
| | <i>Extent and Timing</i> | Prior to determination |
| 3. | Flood Impacts | <p>No quantitative assessment of flood impact has been undertaken since the 2010 letter by WMAwater, which used a superseded and inferior flood model compared to the flood study. Therefore, any conclusions regarding flood impact should be considered preliminary.</p> <p>No consideration has been given to the mechanism of South Creek flooding without significant tailwater effects from the Hawkesbury River, which effectively renders localised changes to landform at the site as insignificant.</p> <p>The proposed modification would triple the volume of fill from the original approval, which is significant and would</p> |

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| | | <p>require numerical modelling assessment to confirm no significant impact is caused. However, under Hawkesbury City Council’s Schedule of Flood Related Development Controls, importation of fill is not permitted, where the flooding is H4, H5 or H6 hazard category.</p> <p>CPHR does not recommend further flood impact assessment modelling, but rather reconsideration of the proposal to respond to the flood constraints of the land as explained under item 1.</p> <p>The recycled water tanks are proposed in an area of high hazard and would become debris in even small flood events. Their location should be reconsidered.</p> <p>Recommended actions:</p> <ul style="list-style-type: none"> • The recycled water tanks should be located on higher ground or potentially replaced with a dam, only if permissible considering environmental constraints and relevant statutory requirements. |
| | <i>Extent and Timing</i> | Prior to determination |
| 4. | Emergency Management | <p>The Flood Risk Management Guideline EM01 Support for Emergency Management Planning should be adequately considered. Guideline EM01 recommends that any emergency response strategy is consistent with NSW State Emergency Service (SES) local flood plans. Issues pertaining to flood emergency management should be coordinated with the SES and adequately resolved prior to determination of the project to ensure that the development would be compatible with the flood function and behaviour of the land.</p> <p>CPHR does not consider that private flood emergency response plans are a substitute for sound land use planning. Section A2.4.2 of Guideline EM01 states that ‘requiring a site-specific flood response plan as a condition of consent for development is not considered a genuine attempt to manage flood risk to future occupants’ and provides further guidance on issues with such plans.</p> <p>Recommended actions:</p> <ul style="list-style-type: none"> • The proposal should address compatibility of the development, residual risk and emergency management, taking into account above ‘Emergency Management comments’. |
| | <i>Extent and Timing</i> | Prior to determination |

Biodiversity

Documents reviewed:

CPHR has reviewed the following documents in preparing its biodiversity advice:

- *Modification Report* (Perram & Partners, January 2025)
- *Appendix K - Biodiversity Development Assessment Report* (Fraser Ecological, 13 December 2024) (BDAR)
- *Appendix D - Plans, Elevations and Surveys set*, Assured Industries, various dates.
- *Appendix J - Landscaping Plan* (Huon, 15 March 2024)
- *Appendix F - Stormwater Management* (Barker Ryan Stewart, 19 September 2024).

Key Assessment Issues

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| 5. | Impacts on western tree corridor | <p>There is insufficient justification for the size of the area to be raised which would result in the complete removal of the western tree corridor. As evident in aerial imagery, the north-western area of this corridor contains established trees.</p> <p>It is also noted that Condition 7B of the MOD3 approval, requires the western tree corridor to be retained as it 'helps to screen the substrate plant's buildings' (Modification Assessment Report, DPIE, 2019).</p> <p>Recommended actions:</p> <ul style="list-style-type: none"> • Avoid impacts to the western tree corridor. • Further justification is required for the extent of the proposed fill and consideration of whether the area of fill can be reduced to retain the existing western tree corridor. Impacts to trees with a medium and high retention value should be minimised in accordance with the 'avoid and minimise' principle outlined in sections 6.2 and 6.12 of the <i>Biodiversity Conservation Act 2016</i> and section 7 of the <i>Biodiversity Assessment Method 2020 (BAM)</i>. • An Arboricultural Impact Assessment (AIA) and Tree Protection Plan (TPP) should be prepared in accordance with the Australian Standard 4970 – 2009. The AIA and TPP should detail the retention significance of the trees impacted and explore the possibility of implementing design changes or tree-sensitive construction methods to maximise the retention of trees that have a medium and high retention value. • The amendment of plans should be undertaken in consultation with an experienced Australian Qualifications Framework (AQF) Level 5 arborist to ensure trees can be viably retained. • A survey plan should be provided that shows the location of existing trees, plotted with survey accuracy. |
| | <i>Extent and Timing</i> | Prior to determination |
| 6. | BDAR – Biodiversity Offsets and Agreement Management System (BOAMS) access | <p>The BDAR case is not available to CPHR in the BOAMS and no digital files have been provided. Both are requirements of the BAM.</p> <p>Recommended action:</p> <p>The ecological consultant is requested to add 'Greater Sydney – Compliance & Regulation' as a Case Party in BOAMS and upload the digital files as specified in Table 27 of Appendix L in the BAM.</p> |
| | <i>Extent and Timing</i> | Prior to determination |
| 7. | BDAR – PCT identification | <p>The BDAR does not provide justification for the best-fit Plant Community Type (PCT) selection and the selected PCT in the BDAR has several Threatened Ecological Communities (TECs) associated with it.</p> <p>Recommended actions:</p> <ul style="list-style-type: none"> • The BDAR is to provide justification for the PCT selection. Refer to section 4.2.3 in the BAM. |

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| | | <ul style="list-style-type: none"> The BDAR is to provide justification whether the vegetation on site is a TEC. Refer to section 4.2.2. of the BAM. |
| | <i>Extent and Timing</i> | Prior to determination |
| 8. | BDAR – avoid and minimise | <p>The BDAR has not addressed how impacts to the western tree corridor, identified as PCT 4025 in the BDAR, have reasonably avoided or minimised. The BDAR must demonstrate genuine efforts have been made to avoid and minimise impacts as set out in sections 6.2 and 6.12 of the BC Act and section 7 of the BAM.</p> <p>Recommended action: Consideration should be given to reducing the area proposed to be filled to avoid impacts to the existing tree corridor along the western edge of the site.</p> |
| | <i>Extent and Timing</i> | Prior to determination |
| 9. | BDAR – mitigate and manage impacts | <p>Two existing stormwater basins are proposed to be filled. There is the potential of these basins to provide habitat for protected fauna.</p> <p>Recommended action: The mitigation section of the BDAR is updated to include a dewatering/fauna relocation strategy for wildlife that may be present at the time of dewatering/filling.</p> |
| | <i>Extent and Timing</i> | Prior to determination |
| 10. | BDAR – mitigate and manage impacts | <p>Landscaping is proposed as part of the development.</p> <p>Recommended action: CPHR request that the mitigation section of the BDAR includes the requirement for a vegetation management plan to be prepared to manage weeds and maintain the proposed plantings specified in the Landscape Plan for a period of five years.</p> |
| | <i>Extent and Timing</i> | Prior to determination |
| 11. | Landscape Plan | <p>The proposed western stormwater basin is to be landscaped.</p> <p>Recommended action: CPHR requests that the landscape plan be updated to provide plantings within and surrounding the proposed western stormwater basin using locally native species made up of a combination of grasses, shrubs and trees.</p> |
| | <i>Extent and Timing</i> | Prior to determination |

End of Submission