

Council Reference: D26/317990
Contact Person: David Zabell

27 July 2026

Industry Assessments
Department of Planning, Housing, and Infrastructure
Locked Bag 5022
Parramatta NSW 2124

Attention: Zoe Halpin

Shoalhaven Starches Expansion Project – MP06_0228-Mod-26
Bolong Road Bomaderry

I refer to the Department of Planning, Housing, and Infrastructure's request for comment in relation to Manildra MOD-26.

Planning Process

Shoalhaven City Council (SCC) notes that this application represents modification 26 of 35 to a development application approved in 2009. That application proposed to implement odour control measures, expand ethanol production from 126ML to 300ML and consolidate all existing consents. A schedule of the works is provided below:

Odour Control Measures	Odour control measures including: • a bioscrubber to collect and treat emissions from the DDG plant; • wet legs on tanks in the DDG, ethanol and glucose plants; • decommissioning of cooling towers in the ethanol plant; • enclosure of buildings and application of negative air pressure to contain fugitive emissions; • a tall emission stack to service the gluten and starch dryers and dry gluten bin; and • a biological wastewater treatment plant (WWTP) on the Environmental Farm, involving ○ conversion of Pond 7 into a covered anaerobic pond, for use as a 90ML bulk ○ volume fermenter, and an aerobic pond for use as a 130ML sulphur oxidation ○ basin; ○ a 4ML membrane bioreactor; and
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	○ a reverse osmosis plant.	
Stillage Recovery (DDG Plant)	New infrastructure, including:	
	• six DDG dryers; • 10 decanters; • two evaporators; • two additional storage tanks; • a DDG pelletiser plant; • a chemical storage area;	• an extension to the DDG loadout shed; • a 200m long overhead services gantry across Abernethys drain; • motor control room; and • additional cooling towers.
Starch Plant	A new dryer and grinder.	
Ethanol Plant	Three fermenters, molecular sieves and four associated cooling towers.	
Packing Plant	Construction of a new packing plant and container storage area on the northern side of Bolong Road, including: • a 270m long rail siding off the existing private rail line; • a pedestrian and service overbridge over Bolong Road and Abernethys drain from • the factory to the packing plant; • a heavy vehicle ingress off Bolong Road and a heavy vehicle egress and light • vehicle ingress and egress onto Railway Street; and • a weighbridge near the Railway Street exit.	
Power Generation	A gas fired boiler adjacent to the existing boiler house and a new gas-fired cogeneration facility at the western edge of the factory site.	
Pipelines	A product pipeline between the factory and new packaging plant on the new pedestrian and service overbridge, and three new pipelines under Bolong Road, including: • a pipeline to carry treated water from the nearby Paper Mill to the factory; • a pipeline to transfer methane gas from the WWTP to the factory; and • an electricity line between the WWTP and the factory.	
Fire system	Two 1.5ML water reservoir tanks and a pump shed on the northern side of Bolong Road adjacent to the BOC gas facility.	

The estimated cost of works at the time was \$200m, would generate 25 ongoing jobs and be completed within 12 months.



Figure 1: The original boundaries of the Shoalhaven Starches and Environmental Farm

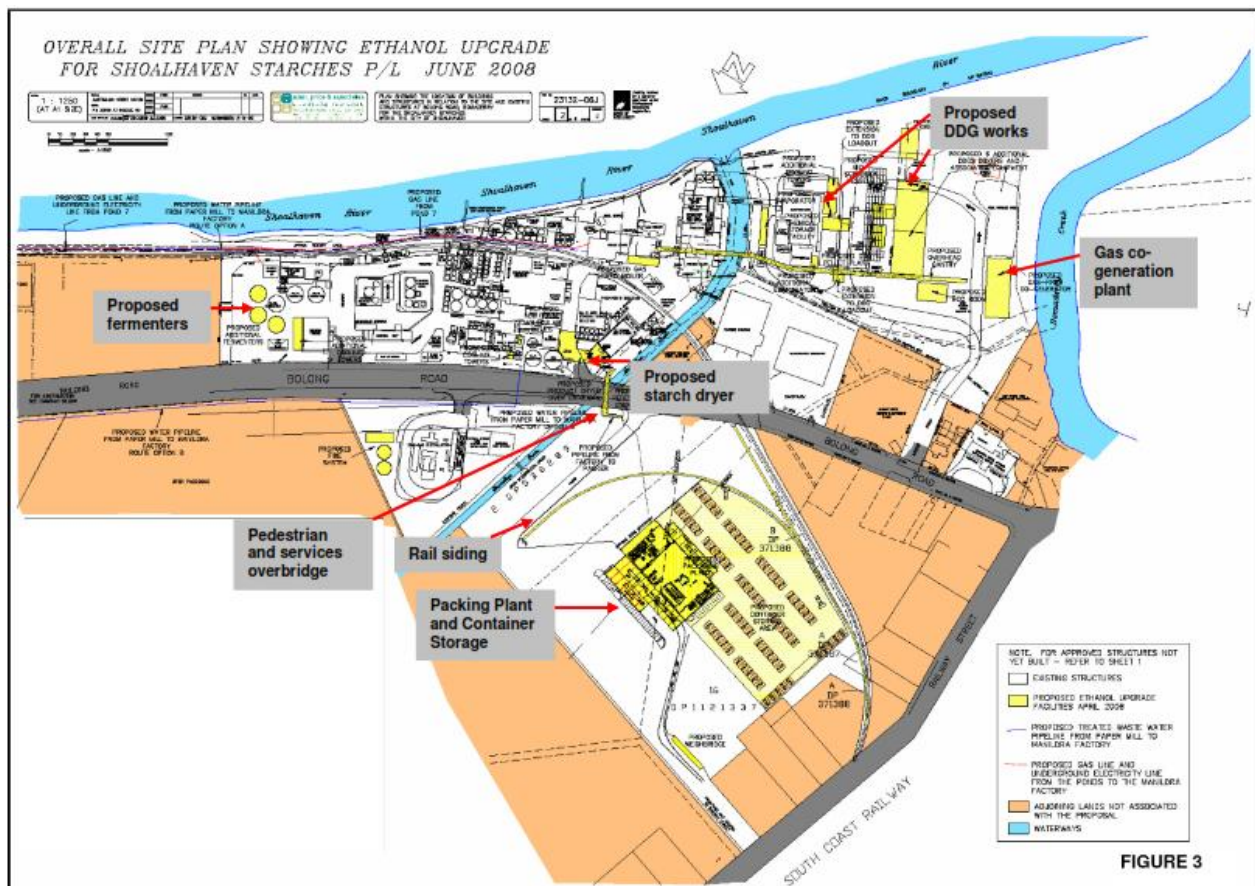


Figure 2: Site plan of the originally approved development

Since that approval, the development has been modified notably as follows:

- The amount of industrial grade flour produced per year has increased from 265,000 tonnes to 1,112,800 tonnes, a more than 4-fold increase.
- 1.5 million litres of hand sanitiser per year is produced on site for distribution.
- Mod 35 seeks to increase ethanol production from 300ML to 400ML per year.
- A gas fired cogeneration plant has been built and then demolished, replaced by a larger facility.
- Incorporated the former Dairy Farmers site.
- Incorporated the former paper mill, 1.5km to the east of the original factory site including an extension to the private rail line and a new warehouse proposed under Mod 32.
- Numerous new structures and equipment, significant increases to the height and footprint of buildings and infrastructure.
- An increase in on-site staff from 60 to 580 staff during peak periods.
- It is unlikely that the development is within the original stated cost of \$200m.

Mod 26 proposes the following works:

Additional grain storage and handling facilities	• The installation of three (3) wheat silos to the west of the former Dairy Farmers factory building. • Construction of a train unloading facility to the south of the former Dairy Farmers factory building. • The installation of a container inverter to be sited to the west of the propped silos. • The installation of a grain conveyor and services gantry that will connect the proposed grain storage and handling facilities along the Shoalhaven River frontage of the site to the Shoalhaven Starches factory site. • The construction of the conveyor will in part require the extension of the rock revetment wall along the Shoalhaven River embankment. • The installation of a weighbridge to the north of the former Dairy Farmers factory building. • The construction of an electricity substation control room, workshop and office building to the north of the former Dairy Farmers factory building. • The above works will necessitate the demolition of the eastern part of the former Dairy Farmers factory building (as required). • The relocation of the existing car park located between the Bolong Road frontage and the former Dairy farmers factory building.
WTP Upgrade	• Construction of one in-ground treated effluent storage pond with a capacity of 150 ML.

	• Convert the existing Wet Weather Storage Ponds No. 1, 2 and 3 into another Anaerobic Digester with a volume of 80 ML. • It is proposed to install an above ground enclosed steel 400 KL Equalisation Tank to the east of the existing SO Basin. • Construction of a building for biogas collection fans from the new Pond 3 digester immediately to the south of the converted Anaerobic Digester. • Installation of Biogas scrubber units. • Interconnecting pipework, pumps and blowers. • A new wastewater collection tank (70 KI) at the factory and new pipe to the WWTP. • Substation and maintenance shed. • Additional MBR and RO plant and associated building.
Relocation of approved finished product silos	Relocate and construct up to 15 finished product silos (starch & gluten) on the main factory site instead of in conjunction with the Northern Packing Plant site.
Rail maintenance building	• Construct a rail maintenance building, with associated internal vehicle access, at the eastern terminus of the recently approved Mod 25 rail line extension to the east of the former Paper Mill factory site. • It is also proposed to install provision for rail fuel storage adjacent to the existing rail line within the former Paper Mill site.
Ethanol Maintenance Building	Construct an Ethanol Maintenance building within the south-eastern part of the main factory site.
Nitric Acid Storage	Construction of a Nitric Acid storage adjacent to existing cooling towers to the west of Abernethys Creek.
Phosphorus Oxychloride storage area	Relocate the approved Phosphorus Oxychloride storage area to a location to the west of the recently constructed starch reaction tanks. The relocation of the Phosphorus Oxychloride storage area will necessitate the relocation of the approved chemical storage area from this part of the site to an area adjacent to the DDGS Plant.
Palmer cooler discharge and combined Boiler Stack for No. 5 & 6 Boilers	• This Modification Proposal also seeks to modify Appendix 3 Mandatory Odour Controls to the Project Approval to enable the re-routing of the Palmer cooler discharge to the Boiler 5 and 6 stack. • Boiler 5 is currently not running, only boiler 6 is currently emitting from this stack. The exit velocity from Boiler 6 only ranges from approximately 6.08 to 7.86 m/s.

	The height of this stack has been reduced from 54 m to 49 m due to corrosion in the stack. Additionally, as outlined above, it has been proposed to redirect emissions from the Palmer Cooler through this stack, bypassing combustion of this exhaust stream. Odour emissions from this source have been estimated based on recent odour sampling and the addition of odour from the Palmer Cooler, based on sampling results from the Palmer Cooler.
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SCC does not object to the works in principle, however asserting that the proposal in the context of the 35 amendments previously approved and currently under assessment can be considered ‘the same or substantially the same development **as the development for which the consent was originally granted** and before that consent as originally granted was modified’ is indefensible (although the applicant has made a valiant effort). Manildra have incrementally increased their footprint, capacity and output such that the scale of their operations approved and proposed by way of modifications dwarves that originally approved.

Furthermore, SCC has received feedback from the community that the Community Consultation Committee meetings have not been held consistently, and that information including agendas and minutes have not been proactively undertaken. SCC recommends that conditions 1 and 6 of schedule 4 be strengthened to ensure that Community Consultation Committee meetings are held a minimum of every three months, and in the preparation of any subsequent applications to the Department or SCC with evidence provided as part of that application.

SCC recommends that Manildra work with the Department, SCC, and the community through their Community Consultation Committee, to prepare a masterplan for the site, with individual applications addressing the various expansions.

Recommendations:

- A The Department must be satisfied that the proposed works meet the ‘substantially the same’ test under section 4.55(2)(a) of the Act.
- B A quantity surveyor’s report should be requested to determine the true cost of works for the development as modified up to and including modification 35.
- C Manildra should be compelled to undertake a masterplan/concept approval.
- D Conditions requiring ongoing community consultation should be strengthened to require meetings every three months, and in the preparation of any subsequent applications to the Department or SCC with evidence provided as part of that application.

Development Contributions

The Shoalhaven Contributions Plan 2026 came into force on 1 July 2026. The plan introduces contributions under s7.12 of the Act, being 1% of the cost of works. Shoalhaven City Council requests that condition 13 be amended to require contributions for the proposed modification, based on the cost of works as determined by a suitably qualified quantity surveyor.

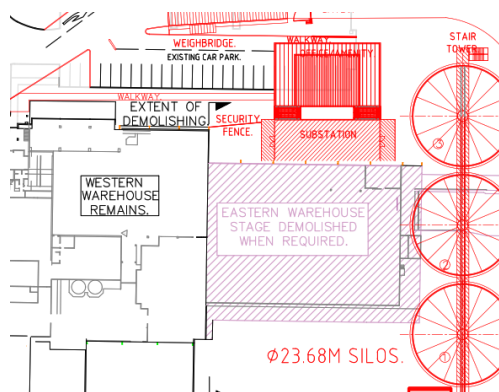
Alternatively, plans are to be submitted illustrating the gross floor area of the site prior to MP06_0228, the gross floor area of the site that was used to calculate contributions at the time of payment, and the gross floor area of the site as proposed. Council will then be able to calculate the contribution required under the relevant contributions plan.

NCC Compliance

The proposed works are located across numerous allotments in the same ownership. Comments have been provided on the following parts of the modification:

Proposed train/ truck un-loader, three grain silos, substation, weighbridge, and office/ amenity building (No. 220 Bolong) – CCs will be required for the buildings and structures. The grain silos and associated stair towers/ bucket elevators and weighbridge are likely to be Class 10a under the BCA, and it appears that they can comply with the BCA.

- Substation – A CC will be required, and a substation building is Class 8 under the BCA. Details of the building would be required with the CC to determine the Type of construction required. There is a 3 metre setback between the proposed substation and office building, with a stair tower connecting/ separating the buildings. The proposed office building is a fire source feature for the substation building. The need for external walls to have a Fire Resistance Level (FRL) will depend upon the Type of construction required for compliance with the BCA.
- The proposed substation building will also be a fire source feature to the existing warehouse buildings. The construction of the substation adjoining an existing warehouse would usually require investigation and/or implementation of fire safety upgrading to the existing building. The eastern and western warehouses are a single building on the site plan and upgrading must consider the entire building.
- The site plan notes that the eastern warehouse will be ‘demolished when required’ and it appears that at least a portion must be demolished for the proposed silo construction. Part 6.1 of the Modification Report indicates that the demolition will be required to construct the silos and the substation building.



- The above works will necessitate the demolition of the eastern part of the former Dairy Farmers factory building (as required).

Figure 3: Extract of site plan and Part 6.1 of the Modification Report

- The use of ‘when’ and ‘as required’ does not provide any definitive outline for the demolition. It is unknown whether a part of the existing eastern warehouse could be demolished to permit the proposed silo construction and maintain its structural adequacy. If the existing building can accommodate partial demolition, the silo construction will not create a fire source feature to the existing warehouse building. *It is recommended* that a condition is placed in a modified consent requiring the eastern warehouse building to be demolished prior to the issue for a CC for the proposed

substation building. This would remove the need for fire safety upgrading (and the associated cost) on a building which is to be demolished at some point in the future.

- Office/ workshop/ amenity building – A CC will be required and full and detailed plans demonstrating the use will need to accompany the application for the certifier to determine the classification. It will contain several storeys of Class 5 and other classes may apply depending upon the use of the workshop. It appears to have a rise in storeys of 4 and will need to comply with Type A construction. There is a 3 metre setback between the proposed office building and the proposed substation, with a stair tower connecting/ separating the buildings. The proposed substation building is a fire source feature for the office building and the loadbearing parts of external walls of the proposed office building will need to have a minimum FRL of 120/60/30 to comply with Type A construction. There does not appear to be any information on the proposed wall construction/ cladding for the building, and therefore any materials required to achieve any FRLs at CC could be deemed consistent with the consent.
- Openings in walls requiring a FRL must be protected in accordance with the BCA and will need to ensure that there is sufficient vertical separation between an opening in another storey (e.g. spandrels).

Train and truck unloader – The building will require a CC and is likely to be assessed as a Class 8 building. It appears that it can comply with the BCA requirements.

Proposed gantry from unloader on No. 220 and secondary screening building (No. 160 and Lot 1) – A CC will be required. The proposed screening building will contain a previously approved/ yet to be constructed substation and the certifier will need to consider potential separation from the rest of the building.

Proposed ethanol maintenance building (No. 160) – This proposed building may be determined as Class 7b and/ or 8 depending upon the details submitted with the CC application. The front elevation of the proposed building (Drawing MN7549-016) shows a rail control room within 3 metres of the building. The certifier will need to consider the classification of the rail control room to determine whether it will be a fire source feature and impact upon the construction of the proposed ethanol maintenance building.

Extension of northern car park and pedestrian access – In addition to the northern car park, some car parking exists on the southern side of Bolong Rd. The car parking on the southern side of Bolong Rd will be reduced because of the modification to the development on No. 220 (e.g. weighbridge and new office/ workshop building).

There does not appear to be any information submitted that addresses the overall numbers of parking for the entire development and the location of the accessible spaces. There does not appear to be any accessible parking spaces proposed in the northern car park. It would be considered inappropriate to locate accessible spaces in the northern car park as they are normally located as close as practicable to the principal pedestrian entry of building/s that are required to be accessible.

New Class 5, 7b and 8 buildings are required to have access for people with a disability to and within all areas normally occupied by occupants to comply with the BCA and Disability (Access to Premises – Buildings) Standards. There is an exemption to the provision of accessibility for areas where it would be inappropriate because of the particular purpose/ use, or an area that would pose a health/ safety risk for people with a disability. I am unsure that an office/ administration building would fit within the exemption criteria in the BCA. It is recommended that the applicant demonstrates that accessible parking is, or will be

provided, as close as practicable to the principal pedestrian entry of buildings that must be accessible, and that a compliant accessway can be provided between the accessible parking space and the entry in accordance with the BCA.

Paper Mill Rail Maintenance building, amenity building, rail fuel container, and car parking (No. 340) – All the buildings will require a CC. The proposed maintenance building is not fully enclosed, is considered Class 8 under the BCA, and it appears that it can comply with the BCA.

Product Silos (No. 160) – The Product Silo Site Plan (Dwg No. MN7549-025) shows the setback to Abernathy's Drain.

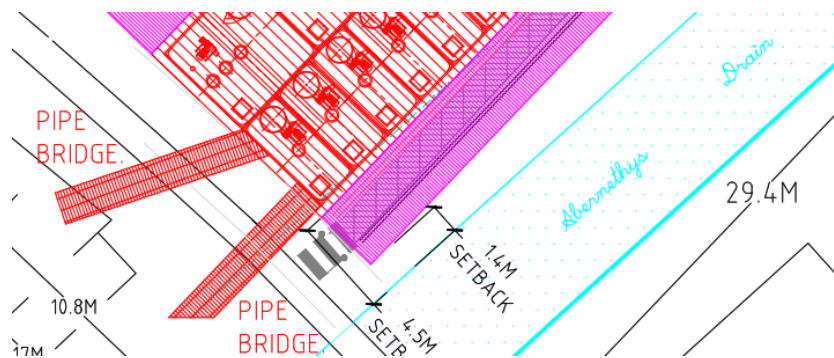


Figure 4: Snip from Product Silo Site Plan Dwg No. MN7549-025

The aerial photography on Council's mapping appears to show the proposed building located in a right of carriageway and easement on Lot B DP 334511. It is recommended that investigation into the right of carriageway is completed to determine whether the proposed silo building can be located as proposed.

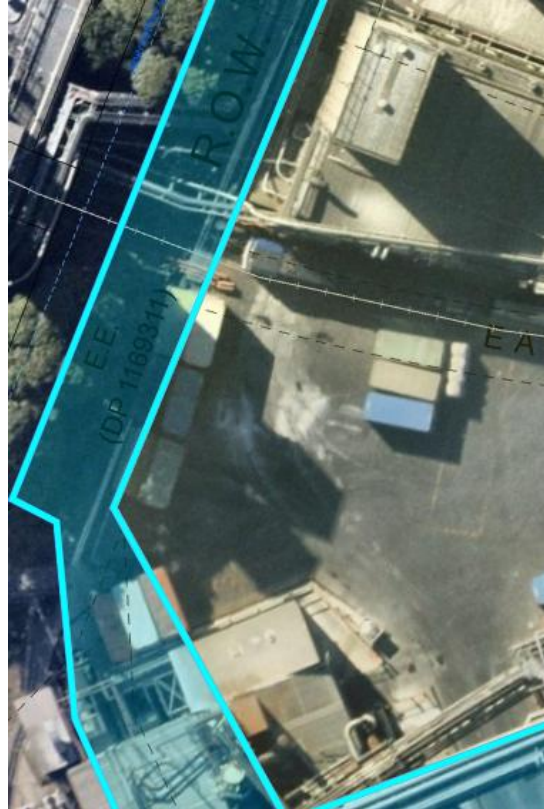


Figure 5: Aerial photo of the location of the proposed building which may encroach into the right of way

A CC or CCs will be required, depending upon staging. It appears that the silos will be contained within a building, and it will be a Class 7b building. The estimated volume of the building will exceed the maximum allowable for Type C construction. The applicant may have to consider increasing construction to Type B to achieve BCA compliance. The elevation of the building (Dwg No. MN7549-026) shows that the wall of the building will be located 4.5 m from the allotment boundary. This will require load-bearing parts of external walls to have an FRL. Metal cladding on steel framing is unlikely to achieve the required FRL. The certifier will need to consider the consistency of the proposed method of compliance to any development consent.

Recommendations:

E The location of the proposed product silo building appears to be located within a right of carriageway (ROW) and easement on Lot B DP 334511. Please demonstrate that the proposed building will be located clear of any ROW or easements.

F The applicant demonstrates that accessible parking is, or will be provided, as close as practicable to the principal pedestrian entry of buildings that must be accessible, and that a compliant accessway can be provided between the accessible parking space and the entry in accordance with the BCA and AS1428.1-2021.

Biodiversity

A site inspection was undertaken by Council's Biodiversity Officer on 20 July 2026. Observations made during the inspection were generally consistent with the vegetation condition, habitat values and impact assessment described within the BDAR.

The BDAR was prepared under the Biodiversity Assessment Method (BAM) using the Streamlined Assessment Module for small area developments and identifies that the Biodiversity Offset Scheme is triggered due to the presence of land mapped on the Biodiversity Values Map.

The assessment identified vegetation within the impact area as:

- PCT 4049 – South Coast Floodplain Grassy Swamp Forest;
- associated with the NSW listed Endangered Ecological Community Swamp Oak Floodplain Forest of the New South Wales North Coast, Sydney Basin and South East Corner Bioregions; and
- associated with the Commonwealth listed Coastal Swamp Oak (*Casuarina glauca*) Forest of New South Wales and South East Queensland Ecological Community.

The BDAR notes that the vegetation present is highly modified and largely comprises planted, regenerating and disturbed vegetation containing substantial weed infestation and low native diversity. While the vegetation meets the diagnostic criteria for the relevant ecological community, it does not meet the minimum condition thresholds for consideration as the EPBC-listed ecological community.

The proposal has been designed to avoid and minimise impacts to biodiversity values wherever practicable. The assessment documents that approximately **0.23 hectares of native vegetation impacts have been avoided** through design refinement, including:

- relocation of infrastructure to avoid impacts within the Water Treatment Plant area;
- avoidance of impacts to the planted vegetation zone;
- avoidance of a hollow-bearing tree;
- avoidance of a recorded stick nest; and
- retention of a number of planted native trees along the Shoalhaven River corridor.

The remaining biodiversity impact is limited to approximately **0.08 hectares of PCT 4049 in a disturbed condition**, associated with the proposed riverbank stabilisation works along the Shoalhaven River.

The BDAR concludes that:

- no serious and irreversible impacts are likely;
- no threatened species credit species require offsetting;
- no hollow-bearing trees will be removed;
- habitat connectivity will be retained;
- impacts can be appropriately managed through implementation of mitigation measures and a Construction Environmental Management Plan; and
- a requirement for **one ecosystem credit** has been calculated under the Biodiversity Assessment Method.

Council notes that the vegetation proposed to be removed forms part of a riparian corridor along the Shoalhaven River and supports habitat values despite its disturbed condition. However, given the limited extent of clearing, the avoidance measures implemented, the retention of habitat features and the proposed biodiversity offset obligation, Council generally agrees with the conclusions of the BDAR.

G Recommendation

The development is to implement the commitments and mitigation measures identified in the BDAR and include appropriate biodiversity management requirements in any future approval.

Car parking

A discrepancy is noted between the submitted architectural plans, the applicant's Traffic Assessment and the parking layout currently constructed on-site.

Based on the submitted architectural plans, the existing approved parking layout comprises 145 spaces. The current Modification Application proposes an additional 283 parking spaces (highlighted in red on the submitted plans), resulting in a total parking capacity of 428 spaces within the car park located opposite Bolong Road.

The applicant's Traffic Assessment states in Table 2 that the existing Northern Carpark has a capacity of 438 parking spaces. However, this figure includes 10 parking spaces immediately adjacent to the BoC site, which are understood to be utilised by Shoalhaven Starches staff. Furthermore, Table 5, which outlines the parking changes resulting from the current modification, indicates that the Northern Carpark will remain at 438 spaces, while parking provision within the Dairy Farmers site will reduce from 70 spaces to 25 spaces.

Based on current GIS aerals, the Northern Carpark currently has **317** operating spaces:



Figure 6: Aerial photo of the car park on the north side of Bolong Road

As such, there is no consistency between the submitted documents to accurately demonstrate the current parking capacity across the proposed sites; the extent of parking changes proposed under this modification; and the associated traffic and parking impacts of the current proposal.

Revised plans and supporting traffic documentation are required to clearly and consistently demonstrate the existing and proposed parking arrangements before a comprehensive assessment can be undertaken.

Proposed Crossing from the Northern Carpark across Bolong Road:

The submitted architectural plans indicate that a new crossing point will be made over the existing median island and gate.

Insufficient detail has been provided to demonstrate that the proposed crossing arrangement, including the modification of the existing median island and associated line marking, will comply with the requirements of AS 1742.10 and provide a compliant pedestrian refuge facility.

The applicant must submit revised engineering plans to SCC that indicate how the existing median strip is to be modified to a pedestrian refuge, demonstrating compliance with the above Australian Standards. A sight distance audit for SSD of approaching vehicles must also be considered, in accordance with Austroads Guidelines.

Once received and assessed in consultation with SCC, the matter would need to be referred to the Shoalhaven Local Transport Forum for formal endorsement. See below plan excerpt:

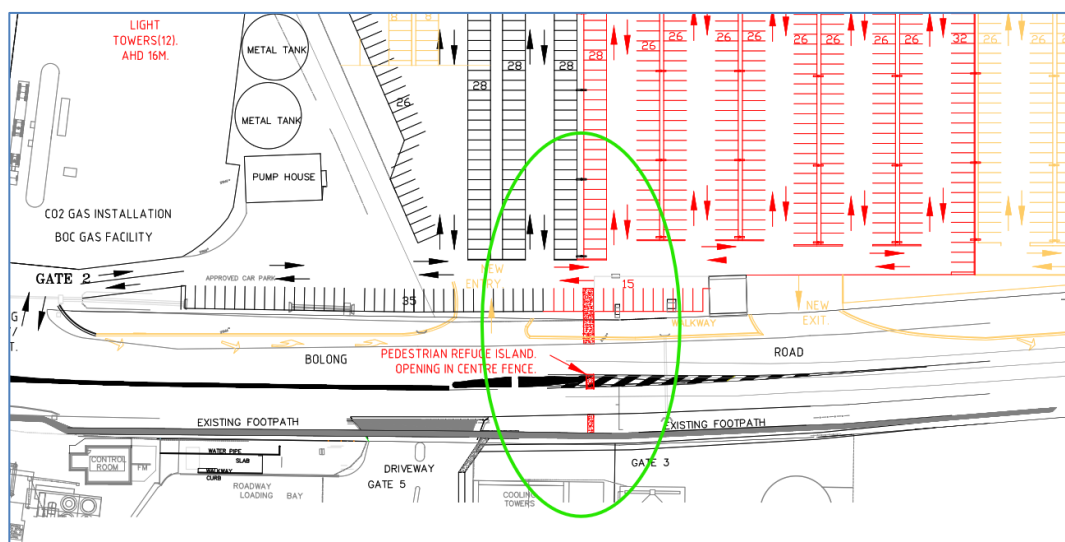


Figure 7: Plan identifying the proposed pedestrian crossing

Noise and Vibration Impact Assessment

- The Noise Report confirms that there will be likely exceedances of the adopted construction noise management levels during construction.
- The Noise Report provides details of construction noise mitigation measures at Table 8.1 including a list of General Controls and Source Controls.
- At section 6.2.2 of the Noise Report, it is stated that cumulative operational noise impacts for the site will exceed the Environmental Protection License requirements. However, it is also stated that operational noise levels associated with the works subject of Mod 26 would not contribute to the predicted cumulative noise impacts.
- Operational noise mitigation measures are recommended and details provided at Table 8.2 in the Noise Report. Broadly the noise mitigation measures recommended involve detailed design of proposed infrastructure including, consideration of noise

characteristics when selecting plant and equipment and placement of proposed equipment to maximise noise screening by existing or proposed structures.

Overall, any future noise issues associated with the proposed development will be managed by the NSW Environmental Protection Authority (EPA). The EPA have developed a Noise Pollution Reduction Program for the site to be implemented as part of the Environmental Protection License.

H Recommendation

All Construction Noise Mitigation Measures listed in Table 8.1 of the Noise Report and all Operational Noise Mitigation Measures listed in Table 8.2 of the Noise Report be included as a condition of consent for the proposed Mod 26.

Air Quality Impact Assessment

- The Air Quality Report states that there will be minimal impact on air quality during construction recommending dust mitigation measures in section 5.4:
 - Prepare a dust management plan.
 - Site inductions to inform construction staff of activities likely to cause high dust emissions and appropriate controls.
 - Dust suppression (water truck)
 - Reduce or stop work if dust plumes observed moving off site
 - Covering loads
- Section 6 of the Air Quality Report provides an Operational Odour Assessment. The odour assessment identifies sources of potential odour impacts on residential receptors during worst case scenario conditions as follows:
 - Ethanol Recovery Scrubber Discharge – 15% of odour impacts
 - No. 3 Gluten dry baghouse – 14% of odour impacts
 - Pellet Plant exhaust stack – 39% of odour impacts
 - Combined boiler stack for no. 5 & 6 boilers – 17% of odour impacts
- Further investigation of odours from these sources is recommended if odour complaints are received or increasing concentrations are observed during quarterly sampling.
- No specific odour mitigation or management options are provided in the Air Quality Report. Further detail of the odour mitigation and/or management options is required.
- An air pollutant inventory is also provided which predicted compliance with assessment criteria at all receptors for all pollutants.

Overall, any impacts on air quality associated with the proposed development are managed by the EPA and an Air Pollution Reduction Program has been developed for the site.

I Recommendation

The applicant must provide details of any specific odour mitigation and management options available to prevent predicted odour impacts.

Site Contamination and Acid Sulfate Soil Assessment

- Geotechnical – no comment. Refers to structural engineering and stabilisation requirements for proposed development.
- Dam Safety – no comment. Refers to historical stability issues for existing and proposed pond embankments at the wastewater treatment plant (WWTP).
- Contamination – this section of the report is characterised as a preliminary site investigation (PSI) for contamination within 13 proposed development areas as part of the MOD 26 development proposal. GHD identify 16 areas of environmental concern (AEC). A detailed summary of the findings of the GHD investigation is provided in Table 6.1 of the Report.

A risk rating for contamination is provided for each AEC across the 13 proposed development areas. The report recommends 'Targeted Site Investigations' be undertaken for AECs that are considered a moderate to high or high risk of contamination in each development area. 4 of the 16 AEC fall into this category.

The Report also recommends that an Asbestos Management Plan (AMP) be developed and implemented for development sites affected by AEC 2: *Potential weathering of hazardous materials from previous site structures that once occupied the site including poor demolition practices*. All sites, except Site 6 *Carpark extension*, Site 7 *Rock wall extension* and Site 12 *Rail maintenance building, access road and fences* therefore require an AMP based on the recommendations in the Report.

In addition, the Report recommends the provision of a CEMP that includes an unexpected finds protocol (UFP) and a site specific WHSE plan. GHD also recommend that the proponent assess waste classification of excavated soils, development of a contamination register, preparation of an Environmental Management Plan and review of the existing chemical register.

All recommendations made in the report regarding mitigation and prevention of further site contamination, site remediation and validation of the site are supported.

- Acid Sulfate Soil – GHD recommend development and implementation of an Acid Sulfate Soil Management Plan (ASSMP) where excavations associated with the proposed development are likely to disturb ASS and/or require dewatering which could result in lowering the water table.
- Salinity Potential – the report recommends soil sampling to assess salinity potential in the eastern portion of the site.
- Riparian Corridor – no comment.
- Review of potential impacts to surface water and groundwater – no comment.

Recommendation

J The proposed TSIs are completed prior to the commencement of any works in affected development areas to facilitate any remediation works and validation of each site that may be required.

K The AMP should provide basic procedures and equipment required where site activities result in ACM being disturbed or encountered including as an unexpected find.

Flooding

The subject property comprises flood prone land. In accordance with Council's *Lower Shoalhaven River Flood Study (2022)* the property comprises a range of hazard/Hydraulic categories with a significant amount of both High Hazard Floodway and Flood Storage areas. Due to the size of the development site, the 2050 Flood Planning level (FPL) varies from 5.5 – 6.1m AHD.

Additionally, it is noted that Council has completed the *Lower Shoalhaven River Floodplain Risk Management Study & Plan (2026)* and it is currently awaiting formal adoption by Council. Once adopted, the 2050 flood planning levels across the Lower Shoalhaven River floodplain will be informed by this study.

To support the modification application, a Flood Assessment prepared by WMAwater has been submitted. The assessment concludes that the proposed works will result in increases in flood levels. The maximum cumulative increases in flood level since 1990 are reported as follows:

- 5% AEP event: up to 0.05 m
- 1% AEP event: up to 0.10 m
- PMF event: up to 0.20 m

The maximum incremental increases in flood level between the November 2025 Existing Model and the proposed Mod26 scenario are reported as:

- 5% AEP event: up to 0.01 m
- 1% AEP event: up to 0.01 m
- PMF event: up to 0.05 m

The assessment notes that many of these incremental impacts occur within land owned by Shoalhaven Starches.

In comparing the 1990 scenario against the Mod 26 proposal for the 5%, 1% and PMF scenarios, flood modelling demonstrates adverse impacts up to 0.05m, 0.1m and 0.2m respectively on adjoining property, including occupied residential and commercial land. However, when comparing November 2025 Existing model against Mod26Design (This modification proposal), flood afflux levels are within the tolerable range for all scenarios.

The proposed development can comply with DCP Chapter G9: Development on Flood Prone Land.

Recommendation

L Office and amenity-type buildings should demonstrate compliance with Council's flood planning requirements, including finished floor levels at or above the applicable 2050 Flood Planning Level.

M Update Shoalhaven Starches Flood Mitigation and Management Plan to incorporate Mod 26 and ensure appropriate measures are put in place to manage the risk to life on site.

Water Quality

An Integrated Water Cycle Management Strategy has been prepared, which concludes:

- The Qualitative Stormwater Quality Assessment demonstrates that operational activity of the minor works to be undertaken within the existing managed area and operational activity of the WWTP, Rail Maintenance Building, the Grain Handling Facility (Unloader, Silos, LV Substation and Weighbridge) and Conveyor are unlikely to increase stormwater pollutant export from the site.
- Stormwater pollutants generated from operational activity of the Northern Carpark (including future Mod 31) can be mitigated by a modifying the existing retention pond with a conventional buffer strip and additional detention.
- Potential short term stormwater quality impacts from the construction works can be mitigated by the implementation of erosion and sediment control plan and staged earthworks such that the performance objectives and criteria in Ch G2 can be satisfied.

The modification proposes 21,094 m² of additional impervious area, comprising:

Proposed Development	Total Impervious Area (m ²)
Modifications to the Wastewater Treatment Plant	3,753
Rail Maintenance Buildings	2,905
Rail Fuel and Provisions Buildings	N/A
LV Substation, Workshop, Amenities & Weighbridge	690
Grain Unloader & Grain Storage Silos	485
Conveyor & Services Gantry	2,269
Ethanol Maintenance Building	150
Rock Revetment Extension	N/A
Northern Carpark extension	10,842
Product Storage Silos	N/A
Nitric Acid Store & Relocation of Phosphorus Oxychloride (POCl ₃) Bund	N/A
Wastewater Tank	N/A
Total	21,094

Where the total impervious area is listed as N/A above, it is due to development being constructed on already impervious land.

The IWCMS states that runoff from the Ethanol Maintenance Building, Product Storage Silos, Nitric Acid Store, Phosphorus Oxychloride Bund and Wastewater Tank will discharge to the site's existing managed drainage network in accordance with the approved

The assessment further states that runoff from the following developments will be directed to the existing stormwater treatment system associated with the former Dairy Factory prior to discharge to the Shoalhaven River:

- LV Substation, Workshop, Amenities and Weighbridge;
- Grain Unloader and Grain Storage Silos; and
- Rail Fuel and Provisions Building.

It is acknowledged that these structures predominantly generate roof runoff and are generally remote from pollutant-generating industrial activities.

The Conveyor roof is proposed to discharge untreated roof water runoff direct to the adjacent surface in a linear pattern which will not result in concentrated runoff. Further, the documentation does not clearly identify the collection, conveyance and treatment arrangements for runoff generated from:

- Rail Maintenance Building; and
- Wastewater Treatment Plant.

A qualitative assessment has been conducted assessing the relative impact of converting trafficable roads to roof or converting agricultural land to roof can be made using Australian Runoff Quality – A guide to WSUD (Engineers Australia 2006) and using MUSIC in the Sydney Drinking Water Catchment (Water NSW 2019). This assessment concludes that replacement of agricultural land and existing trafficable surfaces with roof areas is not expected to increase overall pollutant load and as such, only the Northern Carpark extension is required to be quantitatively modelled. It is, however, noted that most of Shoalhaven Starches was developed during a time when there were no requirements for stormwater treatment for new development. Hence, whether new impervious areas are replacing existing impervious areas or pervious areas, it should be demonstrated that the proposed development can comply with today's standard as per Shoalhaven Development Control Plan (SDCP) Chapter G2. As such, a quantitative assessment should be submitted through MUSIC modelling demonstrating that neutral or beneficial effect on water quality can be achieved.

This approach however fails to account for whether the existing stormwater treatment infrastructure has sufficient capacity and treatment performance to accommodate runoff from the proposed additional impervious areas. The assessment does not quantify:

- Changes in runoff volumes and peak treated flows;
- Changes in pollutant load entering existing treatment systems;
- The capacity of existing treatment devices to accommodate the additional contributing catchment area; or
- Ongoing compliance with the stormwater quality objectives and targets of Chapter G2 of the Shoalhaven Development Control Plan.

The northern carpark extension has been modelled in MUSIC, due to its strong potential to generate stormwater quality impacts during operation because of build-up and

subsequent wash off of particulate matter and vehicle related pollutants. This model is to be provided to Council for review.

It is proposed to treat runoff from the carpark via a buffer strip and modified retention pond.

N Recommendation

Insufficient information has been provided to demonstrate that:

- Runoff from all proposed development areas will be appropriately conveyed and treated prior to discharge;
- Existing stormwater treatment infrastructure has sufficient capacity to accommodate the additional impervious area;
- New impervious areas will not have adverse impacts on water quality, quantitatively demonstrated through MUSIC modelling.
- The proposal will achieve the stormwater quality objectives and pollutant reduction targets of Chapter G2 of the Shoalhaven Development Control Plan; and
- The proposed treatment measures can be effectively implemented, maintained and protected over the life of the development.

A revised IWCMS and MUSIC model is to be provided to Council for review demonstrating that the proposed development will not have an adverse impact on water quality and can comply with all relevant performance criteria of DCP Chapter G2.

Note: Council is generally not supportive of buffer strips unless they can be justified and identified on engineering drawings. If the applicant can detail the buffer strips on engineering plans, the buffer strips can be included in the stormwater quality strategy. The buffer strip would need to be included as a restriction on the use of the land to ensure its ongoing stormwater quality performance.

Coastal Hazards

No site-specific geotechnical report was completed to support the rock extension proposal provided in GHD 2026. The applicant instead defers to the 2022 SMEC report prepared for the riverbank stability assessment. The report provides a conceptual proposal of the revetment design noting that the exact details are to be determined during detailed design. Subsequently, the proposed rock revetment is noted to be presented a geotechnical proof of concept only. Therefore, a detailed design of the proposed rock revetment has been requested for further information and review.

Coastal Hazards:

The Shoalhaven Local Environment Plan 2014 (LEP) does not include mapping of this land within the Coastal Hazard and Risk Planning layer. However, the proposed development is relevant to Section 5.1.3 – other areas of potential coastal hazard risk of Chapter G6 of the SDCP. Subsequently, the geotechnical report has been assessed against the performance criteria of Section 5.1.3. Insufficient is available to determine if the proposed development is consistent with the performance criteria outlined in Section 5.1.3.

In addition to local planning instruments, the land is mapped as coastal use area and coastal environment area within the State Environmental Planning Policy (Resilience and Hazards) 2021 (SEPP RH). It is concluded that insufficient information on the proposed development is available to determine whether it will result in adverse impacts on the coastal environment area or coastal use area at this location.

As part of the development of the Lower Shoalhaven River Coastal Management Program (CMP) a Bank Erosion Assessment was completed which included the foreshore fronting the proposed development. This assessment found that erosion at this location is occurring with the erosion severity considered to be moderate.

The Lower Shoalhaven River CMP Stage 2 Tidal and Coastal Inundation study was also considered in reviewing the proposal. Mapping of inundation for planning horizons in accordance with Council's sea level rise framework show that the site is expected to be impacted by both hazards. These hazards must be considered in the design of the rock revetment. Additionally, consideration made by Council's Floodplain Unit should primarily be considered for managing inundation risk as part of the proposed rock revetment.

O Recommendation

A detailed design of the rock revetment that considers hydraulic loading, flooding and scour assessment is to be submitted for further review of the proposal. The design must consider managing end-effect erosion and demonstrate appropriate tie-in to the adjacent bank/rock wall (western end). Additionally, rock sizing and gradation are to be defined on the design drawings. The design must consider flood and inundation forces for future planning scenarios that account for climate change impacts consistent with Council's sea level rise framework and the proposed design life of the structure.

The detailed design must demonstrate that it has been suitably designed to support the additional loads proposed by Sites 9 and 10 as part of the applicant's proposal.

The applicant must consider the Lower Shoalhaven River Coastal Management Program in preparing the detailed design for the rock revetment, specifically:

- [Stage 2 Tidal and Coastal Inundation Study](#)
- [Stage 2 Bank Erosion Assessment](#)

If you need further information about this matter, please contact David Zabell, Lead Development Nowra on 4429 3528 or at david.zabell@shoalhaven.nsw.gov.au. Please quote Council's reference D26/317990.

Yours faithfully



David Zabell
Lead Development Nowra
City Development

Attachment A – Recommended conditions

Recommended conditions

Condition Title	Condition Text	Reasons
Demolition of Eastern Warehouse Building – Proposed Substation Construction	Prior to the issue of a Construction Certificate for the substation on No. 220 Bolong Rd (Lot 143 DP 1069758), the building nominated as 'eastern warehouse building' on the approved site plan must be demolished in accordance with conditions contained in the development consent.	To ensure an appropriate level of fire safety in the existing buildings on the property.
Construction Certificate	A Construction Certificate must be obtained from either Council or a certifier before any building work can commence.	To ensure an appropriate building and Subdivision Certificates are obtained
Appointment of Principal Certifier	Before building/subdivision work commences a Principal Certifier must be appointed.	To ensure a Principal Certifier is appointed where required.
Notice of Commencement	Notice must be given to Council at least two (2) days before the commencement of building or subdivision work by completing and returning the form ‘Commencement Notice for Building or Subdivision Work and Appointment of Principal Certifying Authority’ .	To ensure appropriate notice is given to Council.
Fire Safety Evidence Compliance	Before the issue of an Occupation Certificate the Certifier must be provided with a Final Fire Safety Certificate showing compliance with the Fire Safety Schedule.	To ensure compliance with the Fire Safety Schedule.
Occupation Satisfaction Conditions Consent	The development must not be occupied or used before an Occupation Certificate has been issued by the Principal Certifier. If an Occupation Certificate is not required, the use must not commence	To ensure conditions of consent are complied with or other satisfactory

	until all conditions of development consent have been met or other satisfactory agreements have been made with Council (i.e., a security).	arrangement made.
Fire Safety – Annual Statement	A building owner must ensure that an annual fire safety statement prepared by a competent fire safety practitioner is issued each year and that a copy of the statement is provided to the Shoalhaven City Council and the Commissioner of Fire and Rescue NSW. An application form is available on Council's website. <i>Note: An annual fire safety statement is a declaration by, or on behalf of a building owner that a competent fire safety practitioner (CFSP) has:</i> (a) assessed, inspected and verified the performance of each existing essential fire safety measure that applies to the building (b) inspected the exit systems serving the building and found that the exit systems within the building do not contravene the Environmental Planning and Assessment Regulation 2021 <i>Failure to give Council an annual fire safety statement by the due date constitutes a separate offence for each week beyond that date for which the failure continues. Substantial penalties for non-compliance apply under the Environmental Planning and Assessment Act 1979.</i>	To ensure an annual fire safety statement is prepared.
Shoalhaven Water – Application for Certificate of Compliance	Before commencement of any works, an application for a Certificate of Compliance must be made with Shoalhaven Water and where required a Water Development Notice is to be obtained. Shoalhaven Water will determine if sewerage and/or water infrastructure and/or easements will be affected by any	To ensure a Water Development Notice and Certificate of Compliance are obtained.

	part of your development including what charges/fees apply. Please visit https://shoalwater.nsw.gov.au/planning-building/developers-consultants/water-development-notice to make application for a Certificate of Compliance or call (02) 4429 3214 to learn more about applying. Upon the receipt of the application, Shoalhaven Water will assess the development and if required will issue a "Water Development Notice" document detailing all requirements which must be met. <i>Note: As water and/or sewerage infrastructure may impact on part/s or all of the development such as building, provision of services, protection of water and/or sewer assets, etc., it is recommended that this application is made as early as possible during the development process.</i>	
Shoalhaven Water – Compliance with Conditions	All conditions listed on the Shoalhaven Water Development Notice at each stage of work must be complied with as relevant to that stage. Written notification must be issued by Shoalhaven Water and evidence provided to the Certifier for each applicable stage.	to ensure compliance with Shoalhaven Water requirements.
Shoalhaven Water – Certificate of Compliance	Before the issue of any Occupation Certificate, a Certificate of Compliance under section 307 of the <i>Water Management Act 2000</i> must be obtained from Shoalhaven Water to verify satisfactory compliance with all conditions for the supply of water and sewerage, as listed on the Water Development Notice. If the development is to be completed in approved stages, or application is subsequently made for staging of the development, separate Compliance Certificates must be obtained for each stage of the development.	To ensure compliance with Shoalhaven Water Requirements.

Flooding – Building Design	Before the issue of a Construction Certificate, a professional engineer, (as defined in the National Construction Code) must submit to the satisfaction of the Certifier, certification that the following items have been detailed on the construction drawings: (a) All habitable floor levels must be constructed at or above the 2050 Flood Planning Level as documented on a Flood Certificate obtained from Council that is based on the latest flooding information held. (b) Any proportion of the structure below the 2050 Flood Planning Level must be built from flood compatible materials. (c) All electrical installations must be constructed above the 2050 Flood Planning Level or be able to be isolated before a flood event. (d) The location of all hazardous substances is located at or above the 2050 1% Annual Exceedance Probability Flood Level. (e) The Applicant shall update the Flood Mitigation and Management Plan for the development to include each modification. The plan shall: i) be prepared by a suitably qualified and experienced engineer recognised under the National Engineers Register (NER) in this field, in consultation with Council and submitted to the Secretary prior to operation of each modification; ii) detail the procedures for managing flood risks during construction, demolition, and operation, including flood recovery measures, procedures for ensuring the	To ensure the development is appropriately designed responding to flood constraints.
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		protection of infrastructure and human safety; iii) identify assembly points, emergency evacuation routes, flood warning alarms and evacuation procedures. iv) describe the controls to be implemented to ensure plant, equipment and stockpiles do not become floating debris during flood events v) demonstrate the development will not unduly increase the dependence on emergency services.	
Flooding Structural Soundness	–	Before the issue of a Construction Certificate, a professional engineer, (as defined in the National Construction Code) must submit to the satisfaction of the Certifier, certification that: (a) can withstand forces of floodwaters including debris and buoyancy forces up to a 2050 0.2% Annual Exceedance Probability flood event. (b) will not become floating debris during a 2050 1% Annual Exceedance Probability flood event.	To ensure the development is appropriately designed responding to flood constraints.
Coastal Landscaping	-	Before the issue of a construction certificate, the applicant must submit to the satisfaction of Shoalhaven City Council's Manager – Technical Services (or their delegate): Detailed landscape plan depicting appropriate vegetation type for the estuarine area to satisfy the performance criteria and acceptable solutions outlined in Section 5.2.6 of Chapter G6 of the Shoalhaven DCP. Exotic species of vegetation are limited to feature trees or shrubs within a native setting. Council has prepared suitable the <i>Shoalhaven Tree Species Lists</i>, listing appropriate species types for Bomaderry.	Encourage foreshore stability, and use of native vegetation

Mitigation of impacts to waterway and foreshore environment and management of erosion.	Before commencement of demolition works, the applicant must submit to the satisfaction of Shoalhaven City Council's Manager – Technical Services (or their delegate), the following documentation: (a) A monitoring plan for assessing, managing and mitigating foreshore erosion fronting the proposed development sites. This monitoring plan must outline appropriate timing and frequency for monitoring foreshore change during construction and following the completion of construction works to ensure that an appropriate setback and factor of safety is retained. The plan should define appropriate triggers related to the actual extent of riverbank erosion experienced as well as predicted impacts by forecast flood events, with appropriate mitigation measures to be outlined. (b) A construction environmental management plan (CEMP) that outlines appropriate measures to mitigate any potential impacts on the adjacent foreshore and waterway environment. (c) The above documentation must be prepared by a suitably qualified professional, accredited by the Certified Environmental Practitioner Scheme (or equivalent).	To mitigate adverse impacts
Coastal – Structural Soundness	Before the issue of a construction certificate, a professional engineer, (as defined in the National Construction Code) must submit to the satisfaction of Shoalhaven City Council's Manager – Technical Services (or their delegate), certification that: (a) All parts of the proposed development are to be founded to minimise the risk of exposure to geotechnical instability resulting from erosion of the foreshore. Foundations designs are to be based	To ensure appropriate design is undertaken before works commence.

	on geotechnical and structural engineering advice as part of the detailed design. (b) An inspection test plan that outlines timing and stages for a geotechnical engineer to review and inspect on-site the footing excavations during construction.	
Pedestrian Refuge – Approval from the Shoalhaven Local Transport Forum	Prior to the issue of any Construction Certificate for works under Mod 26, certified engineering plans must be prepared by a professional engineer (as defined in the National Construction Code) and be submitted to the satisfaction of Council for referral and endorsement by the Shoalhaven Local Transport Forum. The public domain designs must comply with the following: (a) Construct a new pedestrian refuge, making any necessary modifications to the existing signage, linemarking and roadside infrastructure along Bolong Road (including kerb and gutter, median islands or fencing), to comply with AS 1742.10. (b) A sight distance audit, prepared in accordance with AUSTROADS Design Requirements and Specifications, to demonstrate compliant sight distance levels (c) Construct new footpath and kerb ramps either side of the proposed pedestrian refuge, in accordance with Council's Standard Drawings and Engineering Design Specifications (d) The plans must be provided with sufficient detail, including all relevant dimensions (such as road widths, travel lane widths, typical sections with dimensions of proposed traffic control devices, positioning and locations of signage, lengths and offsets for linemarking) and a matrix of all signage, linemarking and traffic control	To ensure the safe pedestrian design

	devices, to demonstrate compliance with relevant Australian Standards.	
Construction Environmental Management Plan	Prior to commencement of works, a Construction Environmental Management Plan (CEMP) shall be prepared and implemented. The CEMP shall incorporate all biodiversity mitigation measures and management actions identified in the Biodiversity Development Assessment Report prepared by EcoPlanning Pty Ltd (Version 1.1, dated 5 February 2026), including pre-clearing surveys, vegetation protection measures, exclusion fencing, weed and pathogen management, erosion and sediment controls, fauna management protocols and measures to protect the Shoalhaven River and adjoining riparian vegetation.	
Biodiversity Management Plan	Prior to the commencement of vegetation clearing or construction works, a Biodiversity Management Plan (or equivalent biodiversity component within the Construction Environmental Management Plan) shall be prepared and implemented. The Plan shall include: (a) clearly mapped disturbance limits; (b) exclusion fencing around all vegetation to be retained; (c) procedures to prevent accidental vegetation clearing; (d) weed and pathogen hygiene measures; (e) erosion and sediment control measures; (f) fauna management procedures; (g) incident reporting requirements; and (h) management measures for works adjacent to the Shoalhaven River.	
Pre-clearing Survey	A suitably qualified ecologist shall undertake a pre-clearing inspection	

	immediately prior to vegetation removal to: (a) confirm the absence of fauna within vegetation proposed for removal; (b) identify any previously unrecorded habitat features, nests or fauna refugia; (c) implement appropriate fauna relocation procedures where required; and (d) confirm retention and protection of the identified hollow-bearing tree and stick nest.	
Vegetation Protection	Vegetation identified for retention shall be protected for the duration of construction through establishment of exclusion fencing or equivalent protection measures. No materials, spoil, vehicles or equipment shall be stored within retained vegetation areas.	
Weed and Pathogen Management	All plant, machinery and equipment entering the site shall be clean and free of weed material. Any new weed incursions resulting from construction activities shall be treated and managed for the duration of works.	
Riverbank and Water Quality Protection	Works adjacent to the Shoalhaven River shall be undertaken in accordance with all recommendations of the aquatic assessment and associated management plans. Appropriate erosion, sediment and water quality controls shall be installed prior to commencement of works and maintained throughout construction.	
Unexpected Fauna Procedure	An unexpected fauna finds procedure shall be implemented during construction. Where native fauna are encountered, works in the immediate area shall cease until the fauna has moved away or has been assessed and relocated by a	

	suitably qualified wildlife handler or ecologist.	
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