

Council Reference: D26/330331
Contact Person: David Zabell

30 July 2026

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

Attention: Rasmus Altenkamp

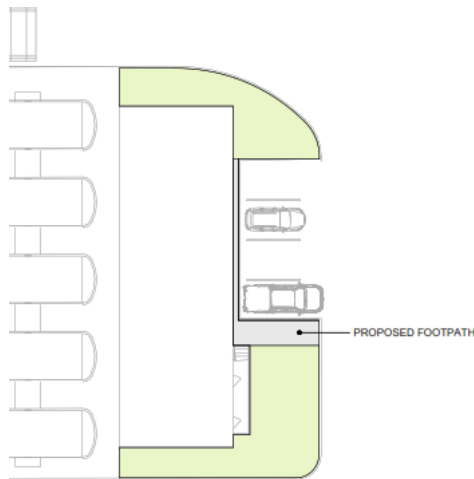
Air Liquide CO2 Processing Plant – SSD-80824235
340 Bolong Road Bomaderry

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

NCC Compliance

The proposed development does include several buildings, and a CC will be required. The submitted site plans do not contain any details of the proposed use of the buildings, or floor plans, elevations etc. It appears from the 3D Views (e.g. A42) that there is a building that could contain offices/ administration (Class 5) adjoining several parking spaces.

The BCA and Disability (Access to Premises – Buildings) Standards require access for people with a disability to and within all areas of the building normally used by the occupants. The principal pedestrian entry to the assumed office/ administration building is via stairs/ landing which will not comply. If the floor level of the building cannot be lowered, then a series of ramps would need to be constructed in the proposed grassed area on the landscape plan (snip below). This would reduce the proposed soft/ pervious area of the development. If the potential reduction in the turfed area does not raise any planning concerns, this can be addressed at CC.



In addition, an accessible car parking space will be required which has not been shown on any of the plans. Any accessible parking space should be located amongst the spaces immediately adjoining the assumed office building. The provision of an accessible parking space complying with AS2890.6 will require a shared area adjoining the space. The provision of an accessible car space in the existing arrangement will reduce the total number of proposed parking spaces by one. If a potentially reduced number of car parking spaces does not raise any planning concerns, it can be addressed at CC.

The use of the two buildings located between the processing plant and Bolong Road is unknown, as is the distance/ setback between the two buildings. If the separation between the buildings is less than 3 metres, the external walls may require a Fire Resistance Level (FRL) to comply with the BCA.

The plans that have accompanied the application do not appear to have met the minimum level of information for submission. It is recommended that the consent authority request amended/ additional plans that shows the use of the buildings.

I have also provided conditions for the consent authority to consider including in any consent.

Biodiversity

A site inspection was undertaken by Council's Biodiversity Officer on 20 July 2026. Based on the site inspection and review of the Biodiversity Development Assessment Report (BDAR) prepared by Ecological Strategies (April 2026), Council generally agrees with the findings and conclusions of the BDAR.

The proposal comprises construction of a liquid carbon dioxide processing facility and associated pipeline infrastructure on land at Bolong Road, Bomaderry/Bolong. The development footprint is approximately 2.15 ha and is predominantly located within previously cleared and disturbed land.

The BDAR identifies that the subject land is highly modified as a result of historic clearing, agricultural activities and landscaping. Native vegetation within the site largely occurs as planted rows of native trees around lot boundaries and roadsides. The majority of the site consists of exotic grassland and previously cleared land.

Vegetation mapped within the subject land includes:

- Approximately 21.4 ha of PCT 4051 South Coast Lowland Red Gum–Swamp Oak Forest in moderate condition.
- Approximately 17.2 ha of exotic grassland/non-offsettable grassland.
- Approximately 0.27 ha of PCT 4049 South Coast Floodplain Grassy Swamp Forest associated with the Shoalhaven River, which will not be impacted.
- Approximately 0.19 ha of exotic/planted vegetation.

The BDAR concludes that:

- No State or Commonwealth listed Threatened Ecological Communities occur within the development footprint.
- No threatened flora species were recorded during surveys.
- No threatened fauna species were recorded during surveys.
- Habitat values are limited and generally confined to potential foraging opportunities for highly mobile fauna species.
- The vegetation to be impacted is highly fragmented and disturbed.
- No Serious and Irreversible Impacts (SAIL) are anticipated.
- No threatened species credits are required.

The proposal will result in the removal of:

- **0.18 ha of PCT 4051 South Coast Lowland Red Gum–Swamp Oak Forest;** and
- **1.88 ha of exotic grassland/non-offsettable grassland.**

The BAM assessment determined a vegetation integrity score of **33.7** for the impacted PCT 4051 vegetation, resulting in a requirement for **3 ecosystem credits**. No species credits are required.

The BDAR demonstrates that avoidance and minimisation measures have been incorporated into the design, including relocation of the pipeline alignment away from the Shoalhaven River corridor and retention of the majority of planted native vegetation. The proposal retains approximately 22.33 ha of native vegetation and results in a minor reduction in native vegetation cover within the broader assessment area.

Council notes that the development has generally been located within previously disturbed land and that impacts to native vegetation have been minimised where practicable. The BDAR adequately assesses the biodiversity impacts of the proposal and identifies appropriate mitigation measures to manage potential indirect impacts to retained vegetation and the adjacent Shoalhaven River environment.

Council supports the implementation of the mitigation measures identified within the BDAR, including:

- Installation and maintenance of erosion and sediment controls.
- Protection fencing around retained native vegetation.
- Delineation of environmental no-go areas.
- Weed and pathogen management measures.
- Preparation and implementation of a Construction Environmental Management Plan (CEMP).

- Unexpected fauna finds and fauna rescue procedures.

Based on Council's site inspection and review of the BDAR, Council is satisfied that the biodiversity impacts of the proposal have been appropriately assessed and that, subject to implementation of the recommended mitigation measures, the proposal is unlikely to result in significant biodiversity impacts beyond those identified within the BDAR. The offset obligations identified by the BAM should be secured in accordance with the requirements of the Biodiversity Offsets Scheme.

Flooding

The 340 Bolong Rd, BOLONG – Lot A DP 3845559, property comprises flood prone land. In accordance with Council's Lower Shoalhaven River Flood Study (2022) the development site comprises High Hazard Flood Storage hazard/hydraulic areas. The 2050 Flood Planning level (FPL) for this property is 5.5m AHD.

Additionally, it is noted that Council is in the final stages of the Lower Shoalhaven River Floodplain Risk Management Study & Plan (2026), and while awaiting formal adoption by Council, this plan has been endorsed by the Northern Floodplain Risk Management Committee and provides Council with contemporary flood data within the catchment. Whilst this data cannot be formally used, it may provide guidance for the proposed development. In accordance with the Lower Shoalhaven River Floodplain Risk Management Study & Plan (2026), the development site comprises of High Hazard Flood Storage hazard/hydraulic areas and has a 2050 Flood Planning level of 5.4m AHD.

The proposed development is for the construction of a Chemical manufacturing plant (CO₂ processing plant) and associated works. The proposed development will allow for the capture and the purification of the CO₂ generated as a by-product of the broader Shoalhaven Starches ethanol production processes into food and beverage grade Liquid Carbon Dioxide (LiCO₂).

The site of the proposed CO₂ processing facility is currently vacant land. The proposal has been assessed as a Land Use Type C – Commercial/Industrial/Agricultural Buildings/Retail, in accordance with Chapter G9: Development on Flood Prone Land.

To address the flooding constraints, the applicant has provided a Flood Impact and Risk Assessment, prepared by Martens (MA). This assessment conducts a comparison between Cardno (2022) and MA peak flood levels for the 1% AEP flood event. Flood Levels as modelled by MA are generally consistent with Cardno's 2022 modelling.

The proposed fill pad results in an increase in flood levels up to 80 mm on the site. These increases are largely isolated to the undeveloped open space area on the site, west of the site, and on Manildra owned land, with some encroachment into the existing industrial areas in the east of the property (Manildra owned). There are no offsite flood level increases above 10 mm in the 5% AEP event and no areas above 50 mm in the 1% AEP and 0.2% AEP flood events.

Further, to assess potential impacts as a result of climate change, the 0.2% AEP rainfall intensities were adopted as a proxy for the 1% AEP with climate change scenario in line with FRM guide FB01. Comparison of rainfall IFDs indicates the 0.2% AEP rainfall is approximately 25% higher than 1% AEP IFDs which corresponds to between a SSP2-4.5 and SSP3-7.0 climate change scenario for the year 2100.

No unacceptable adverse impacts were noted in the FIRA as a result of the development.

The FIRA, using the NSW SES Flood Timeline Evacuation Model, has demonstrated that the total time required for evacuation of all site occupants to outside of the PMF extents is 3.2 hours. Therefore, a BoM flood warning for moderate flooding at the Nowra Bridge gauge will provide sufficient warning time in all flood events to achieve full evacuation of the Site considering the minimum (worst case) warning time of 10.0 hours. Further, the Flood Emergency Response Plan (FERP) outlines recommendations to ensure that in the event of a flood at the Site, risk to personal safety and the environment is appropriately managed. It will be conditioned that this information is provided to Manildra and incorporated into the overall Flood Evacuation Plan.

Council notes that all proposed building Finished Floor Levels (FFLs) and electrical devices are designed or located at or above a designated FPL of 5.1 mAHD. This FPL has been determined by MA modelling based on their 1% AEP flood level + 0.5m freeboard. However, the FPL for the site is based on the latest completed floodplain risk management study and plan for the catchment, currently being the Lower Shoalhaven River Floodplain Risk Management Plan – Climate Change Assessment (2011) with a FPL of 5.5m AHD. Once the Lower Shoalhaven River Floodplain Risk Management Study & Plan (2026) has been adopted by Council, the updated FPL will be 5.4m AHD. The use of Council's adopted FPL will be conditioned.

Overall, the modelling results show that in the 1% AEP event the proposed development does not materially alter the local, offsite flood characteristics. Overall, the proposed flooding conditions are largely unchanged from the existing condition, and the flood impacts of the development are considered acceptable. The proposed changes do not pose any adverse impacts in the overall ability to safely occupy or efficiently evacuate the Manildra site. In consideration of these aspects, the proposed site use is consistent with the existing industrial use and is compatible with the site flood function and behaviour.

The proposed development can comply with DCP chapter G9 and clause 5.21 of the Shoalhaven LEP (2014).

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

Water Sensitive Urban Design

In accordance with Table 5 of Council's Chapter G2: Sustainable Stormwater Management and Erosion/Sediment Control, the proposal is classified as a large-scale development and is therefore required to be supported by an integrated water cycle management strategy, outlining how the relevant stormwater objectives are satisfied.

A Stormwater Management Plan, prepared by Babbage, has been submitted by the applicant. The plan outlines a proposed treatment strategy consisting of Ocean Guard units in sumps and a Jellyfish treatment device (JF-1200-2-1 WSUD) located immediately upstream of the detention pond. MUSIC modelling was completed to verify that the proposed treatment devices could successfully reduce contaminants to the required levels. It will be conditioned that the MUSIC model is provided to Council for review prior to CC.

Table 5 of the Stormwater Management Plan indicates that the key pollution reduction targets can be achieved. It is unclear what treatment capacity of these assets has been used in the modelling.

The proposed development can comply with DCP Chapter G9.

Onsite Detention

It is noted that the rational formula was used to estimate OSD requirements. This method is no longer supported by Australian Rainfall and Runoff 2019. However, it is noted that the Development Engineer has conditioned the use of DRAINS modelling (or equivalent) during CC stage to demonstrate that the stormwater system, including the detention basin, is appropriately sized in accordance with current best practice. This is acceptable.

Coastal Hazards

The Shoalhaven LEP does not include mapping of this land within the Coastal Hazard and Risk Planning layer. However, the proposed development is considered relevant to Section 5.1.3 – other areas of potential coastal hazard risk of Chapter G6 of the Shoalhaven DCP. Subsequently, the geotechnical report has been assessed against the performance criteria of Section 5.1.3. It is considered that the proposed development is consistent with the performance criteria outlined in Section 5.1.3, subject to conditions included within this application.

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 the proposed development will not 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 along the adjacent foreshore with the erosion severity considered to be high to moderate. Subsequently, the alternate solution to piping the carbon dioxide pipeline along the rail corridor is not supported for the proposed development.

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 not expected to be impacted by either hazard.

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 a quantity surveyors report is submitted to Council prior to determination to confirm the amount to be paid.

If you need further information about this matter, please contact me on 4429 3528 or at david.zabell@shoalhaven.nsw.gov.au. Please quote Council's reference D26/330331.

Yours faithfully



David Zabell
Lead Development Nowra
City Development

Attachment A – Recommended conditions

Recommended conditions

Condition Title	Condition Text	Reasons
Section 7.12 Levy	In accordance with section 7.12 of the Environmental Planning and Assessment Act 1979 and Shoalhaven Contributions Plan 2026 (the Plan), the Applicant is required to pay to Council a levy of 1% of the proposed cost carrying out the development for which consent is granted as determined in accordance with section 208 of the Environmental Planning and Assessment Regulation 2021 and the Plan. The levy is required towards the cost of the provision, extension or augmentation by Council of one or more of the public amenities and public services specified in the Works Schedules in Appendix F of the Plan. At the date of this consent, the proposed cost of carrying out the development the subject of this consent is determined by Council to be EstCost and the amount of the levy payable to Council is \$(INSERT). The proposed cost of carrying out the development the subject of this consent will be adjusted before payment of the section 7.12 levy according to positive movements in the Consumer Price Index (All Groups Index) for Sydney (CPI) for the period between the date of this consent and the day on which the section 7.12 levy is paid. The levy must be paid to Council before the issuing of a Construction Certificate. A copy of the Plan and accompanying information is available on Council's website www.shoalhaven.nsw.gov.au Click the link to visit our Contributions page and request an invoice for payment. Shoalhaven Contributions Plan Shoalhaven City Council	To ensure applicable local infrastructure contributions are collected.

Prevention of waterway contamination	The construction contractor is to employ suitable methods to mitigate and control impacts to water quality during construction that may result from sedimentation or the disturbance of bottom sediments. A marine spill kit must be on-site during construction works. No refuelling of machinery is to occur on or adjacent to the waterway and machinery must be decontaminated prior to entering any waterway	To mitigate adverse impacts to water quality
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 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 portion 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) A flood evacuation plan must be prepared to ensure permanent, fail-safe, maintenance-free measures are incorporated in the development to ensure that the timely, orderly and safe evacuation of people is possible from the area and that it will not add significant cost and disruption to the community or the SES. This plan is to consider for pre-flood event planning the using Flood Warning Products available from the Bureau of Meteorology.	To ensure the development is appropriately designed responding to flood constraints.

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 scenario 1% Annual Exceedance Probability flood event. b) Will not become floating debris during a 2050 scenario 1% Annual Exceedance Probability flood event.	To ensure the development is appropriately designed responding to flood constraints.
Water Sensitive Urban Design - Private Devices	Before the issue of an Occupation Certificate, the permanent stormwater treatment system must be compliant with the Restrictions on the land.	To stormwater infrastructure is consistent with any restrictions on the land.
Water Sensitive Urban Design – Private Devices	Before the issue of a Construction Certificate, detailed design of permanent stormwater quality improvement devices must be certified by a professional engineer, (as defined in the National Construction Code) demonstrating the appropriateness of the proposed design for the site in accordance with Council's Engineering Design and Construction Specifications and approved by the Certifier. Specifications can be found on Council's web site. The drainage design must also not include any uncoated metal (i.e. Copper etc.) surfaces such as roofs, facades and/or downpipes.	To ensure stormwater infrastructure is designed appropriately.
Water Sensitive Urban Design - Water Quality, Retention and Reuse	Before issue of a Construction Certificate, a detailed design of permanent stormwater quality improvement devices must be certified by a professional engineer, (as defined in the National Construction Code) who can demonstrate the appropriateness of the proposed design for the site in accordance with Council's Engineering	To ensure stormwater infrastructure is designed appropriately.

	Design and Construction Specifications and is to be approved by the Certifier. Specifications can be found on Council's website. The stormwater treatment, retention and reuse design must comply with the following: i) The WSUD strategy must be able to remove 80% of Total Suspended Solids (TSS), 45% of Total Nitrogen (TN) and 45% of Total Phosphorus (TP) for the total site area as demonstrated using MUSIC software. The detailed MUSIC model must be provided to Council for acceptance. ii) For proprietary treatment devices, documentation from the supplier providing evidence that the proposed device has been appropriately sized for the contributing catchment must be submitted. Documentation from an independent third party (such as SQIDEP or equivalent) confirming the recommended MUSIC pollutant reduction targets must also be provided.	
Water Sensitive Urban Design - Operation and Maintenance Manual	Adopted WSUD Management, Operation, Maintenance and Monitoring Manual/s for the permanent stormwater quality improvement devices must be submitted to Council before the issue of the Construction Certificate. The manuals must be prepared by a suitably qualified professional in accordance with the objectives and criteria identified in the approved Integrated Water Cycle Management Plan.	To ensure stormwater infrastructure is designed appropriately.
Shoalhaven Water – Application for	Before commencement of any works, an application for a Certificate of Compliance must be made with	To ensure a Water Development Notice and

Certificate of Compliance	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 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>	Certificate of Compliance are obtained.
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.	To ensure compliance with Shoalhaven Water Requirements.

	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.	
Soil Management	While site work is being carried out, the Certifier must be satisfied all soil removed from or imported to the site is managed in accordance with the following requirements: iii) All excavated material removed from the site must be classified in accordance with the EPA's Waste Classification Guidelines before it is disposed of at an approved waste management facility and the classification and the volume of material removed must be reported to the Certifier iv) All fill material imported to the site must be: i) Virgin Excavated Natural Material as defined in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i>, or ii) Material identified as being subject to a resource recovery exemption by the NSW EPA, or v) A combination of Virgin Excavated Natural Material as defined in Schedule 1 of the <i>Protection of the Environment Operations Act 1997</i> and a material identified as being subject to a resource recovery exemption by the NSW EPA.	To ensure excavated material is appropriately disposed of and all fill material is appropriate for usage on site.

Waste - Private Collection Service	Before the issue of an Occupation Certificate, the developer/owner must provide evidence to the Certifier of a formal agreement with a licenced private waste contractor to service the development. A copy of the contract must be forwarded to Council. The agreement must ensure: a) the removal of all waste from the developed property. b) the service is functional and meets the operational requirements for the developed property. c) the service minimises environmental nuisances including noise and other adverse impacts on the safety and amenity of residents and the public. the developer/owner indemnifies Council against claims for loss or damages, should Council take over provision of the service at some point in the future.	To ensure an appropriate waste management agreement is entered into.
Site Management - Commercial/Industrial Development	The owner or operator must at all times be responsible for on-going site management and maintenance in accordance with the following: a) loading and unloading in relation to the use of the premises must occur in the designated loading areas or within the road reserve under an approved traffic control plan. b) goods or machinery must be stored, and all activities must occur, inside the building(s) and not in the carpark or driveway areas. c) maintenance and replacement (if necessary) of all landscaping in accordance with the approved landscape plan. d) maintenance of vehicular movement areas including driveways, carparking, manoeuvring areas, line marking, pedestrian facilities, lighting,	To ensure the site is maintained and operated in a safe and appropriate manner.

	to the standard specified by this consent. e) ongoing waste and recycling must be managed in accordance with the approved Waste Management Plan. Waste bins are not to be stored within the loading area/space that is visible from a public place. f) maintenance of stormwater drainage pipes and systems to ensure efficient discharge of stormwater in accordance with the approved stormwater drainage plan. g) maintenance of buildings, fencing, signage/markings to the standards specified in this consent. h) the removal of all graffiti within a maximum of 14 days of being notified by Council.	
Waste Management Plan – an approved document of this consent*	Before the commencement of site works a waste management plan for the development must be provided to the Certifier for review and approval.	To ensure an appropriate waste management plan is provided.
Biodiversity Mitigation Measures	All biodiversity mitigation and management measures identified in the approved BDAR are to be implemented for the duration of construction and operation of the development.	To ensure the recommendations of the BDAR are implemented
Protection of Retained Vegetation	Retained native vegetation is to be protected by exclusion fencing prior to commencement of works and maintained for the duration of construction. No stockpiling, vehicle access, storage of materials or ancillary works are to occur within protected vegetation areas.	To protect native vegetation during construction
Erosion and Sediment Controls - Soil and Water Management Plans	Before the issue of a Construction Certificate, a Soil and Water Management Plan and specifications must be prepared in accordance with Landcom's publication Managing Urban	To ensure an appropriate Soil and Water Management Plan

	Stormwater - Soils and Construction (2004) by a Professional Engineer, (as defined in the National Construction Code) to the satisfaction of the Certifier. All plans must include: a) Area proposed to be exposed to the possibility of erosion as used in calculations; b) Site access locations and stabilisation details and restrictions; c) Erosion and sediment control locations and types; d) Soil, water and drainage patterns and management plans; e) Location of vegetated buffer strips, unstable slopes, boggy areas, and restricted "no access" areas; f) Nature and extent of proposed clearing, excavation and filling; g) Approximate location and proposed treatment of haul roads, borrow pits, site sheds and stockpiles; h) Proposed staging of construction and SWMP measures; i) Inspection and maintenance program for all soil and water management measures; j) Disposal site for silt removed from sediment traps; k) All design criteria and calculations used to size erosion and sediment control measures; l) Site rehabilitation details including frequency of watering; m) Identification of existing vegetation and site revegetation to have 70% cover established before plan is decommissioned; n) Existing and final contours (clearly distinguished and adequately annotated);	has been prepared.
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	o) Standard construction drawings for proposed soil, water and drainage management measures. p) All implemented measures must ensure that a <i>pollution incident</i> must not occur as defined by the Protection of the Environment Operations Act (POEO). q) All implemented measures must: r) not cause water pollution as defined by the Protection of the Environment Operations Act (POEO). s) be maintained at all times. t) not be decommissioned until at least 70% revegetation cover has been established. Before the issue of a Construction Certificate, a Soil and Water Management Plan must be prepared by a Professional Engineer, (as defined in the National Construction Code) to the satisfaction of the Certifier.	
Weed Management	Weed management measures are to be implemented during construction to prevent the spread of existing weeds and pathogens into retained vegetation and adjoining lands.	To appropriately manage weeds
Fauna Management	In the event native fauna are encountered during vegetation clearing or construction works, works are to cease in the immediate area and fauna managed by a suitably qualified ecologist in accordance with relevant wildlife legislation and approved management procedures.	To protect fauna during construction
Landscape Plan	Prior to commencement of landscaping works, the Landscape Plan and planting schedule should be reviewed and amended to remove the proposed use of Buffalo Grass and replace it with a suitable native grass or native turf	To ensure adequate landscaping contributes to the visual interest of the property and

	species, where practicable, to better align with the biodiversity objectives of the development and minimise the introduction or proliferation of non-native species.	enhance biodiversity on site
Existing Infrastructure	Any required alterations or damage to infrastructure will be at the developer's expense. <i>Note: It is recommended prior to the issue of a Construction Certificate, all infrastructure, existing and proposed, is to be shown accurately on construction plans with clearances clearly labelled confirming that the proposed works do not affect any existing infrastructure. This will reduce the potential for unexpected costs and expenses.</i>	To ensure existing infrastructure is accounted for and any damage to infrastructure is suitably repaired.
<u>Car Parking Design Standards</u>	Prior to the issue of a Construction Certificate, certified engineering design plans and specifications must be prepared by a professional engineer, (as defined in the National Construction Code) or surveyor and approved by the Certifier. The car parking and access design must comply with the following: d) Generally, in accordance with the approved plans e) AS2890.1 and AS2890.2 where applicable. f) Constructed in accordance with the following: i) for light vehicular loading ii) with a flexible pavement, surfaced with 30mm of AC10 asphaltic concrete, constructed for a minimum traffic loading of 1 x 10⁶ ESA, or	To ensure carparking has been appropriately designed.

	iii) with a concrete pavement, constructed for a minimum traffic loading of 1 x 10⁶ ESA. g) Bordered in accordance with Council's Standard Drawings by: i) concrete kerbing, except where surface runoff is concentrated, in which case concrete integral kerb and gutter must be constructed.	
Stormwater – Major Development Design Standards (Urban)	Before the issue of a Construction Certificate, certified engineering design plans, specifications, and DRAINS model (or approved alternative) must be prepared by a professional engineer, (as defined in the National Construction Code) or surveyor and approved by the Certifier. The stormwater drainage design must comply with the following: a) Major and minor drainage systems in accordance with Council's Engineering Design Specifications - Section D5 - Stormwater Drainage Design and utilising Australian Rainfall and Runoff (ARR, 2019) Guidelines. b) The minor and major systems must be designed for a 18.13% AEP and 1% Annual Exceedance Probability (AEP) rainfall events, respectively. c) Generally, in accordance with approved concept stormwater design plan d) Where a pipe drains a public road through land adjoining the road, the pipe is to be designed to cater for the 1% AEP event with an overland flow path to provide for bypass/surcharge in the event of the pipe or pit inlet being 50% blocked.	To ensure stormwater infrastructure is designed appropriately.

	e) The existing stormwater drainage system is to be adjusted to suit the new works. In this regard the following is required: ii) existing drainage systems through lots draining public roads are to be upgraded where necessary to contain flows in accordance with Council's Engineering Design Specifications - Section D5.04. iii) all relevant calculations are to be noted on the drainage plans to confirm the adequacy of the existing system, or the upgraded design. Design of stormwater drainage is to include piping, swales and easements to facilitate future development of the site.	
Stormwater - On-Site Detention Design Standards	Before the issue of a Construction Certificate, details of on-site detention must be provided on the Construction Certificate plans and approved by the Certifier. On-site detention must be provided as per certified engineering design plans and specifications prepared by a professional engineer, (as defined in the National Construction Code) or surveyor. The on-site stormwater detention (OSD) design must be designed such that stormwater runoff from the site for design storm events up to and including the 1% AEP does not exceed the pre-developed conditions.	To ensure stormwater infrastructure is designed appropriately.
<u>Construction Traffic Management Plan</u>	Before the commencement of works, a Construction Traffic Management Plan detailing the proposed method of dealing with construction traffic and parking must be approved by Council. Details must include, but are not limited to:	To ensure ongoing compliance.

	a) Stabilised site construction access location b) Proposed haulage routes for delivery of materials to the site c) Proposed haulage routes for spoil disposal from the site d) Traffic control planning for each of the various phases of construction and/or vehicle movements associated with construction e) Parking arrangements for construction employees and contractors f) Proposed maintenance of the haulage routes and access locations g) Name of the person responsible for such maintenance h) Loading / unloading areas i) Requirements for construction or work zones j) Pedestrian and cyclist safety k) Speed zone restrictions.	
Earthworks - Cut, Fill and Grading	The maximum grading of cut or fill must be 2H:1V where there is no retaining wall or no other method of stabilising cut or fill during construction. Earthworks and retaining walls must be constructed as per the approved plans.	To ensure earthworks are appropriately retained.
<u>Stormwater - Overland Flow, Redirecting and/or Concentrating Stormwater</u>	All excavation, backfilling and landscaping works must not result in: a) any change to the overland stormwater flow path on your property and or a neighbouring property. If any change to the overland flow path occurs on a property, the stormwater runoff must be collected and directed to a legal point of discharge. b) the redirection and/or concentration of stormwater flows onto neighbouring properties.	To ensure ongoing compliance.

Carpark - Evidence of Completion	Before the issue of a full Occupation Certificate, all driveway and carpark works internal to the site as shown on the approved plans must be completed.	To ensure the completion of the driveway and interna driveway in a timely manner
<u>Stormwater - Works as Executed</u>	Before the issue of an Occupation Certificate, a Works as Executed Plans and certification must be submitted to the Council by a licenced plumber/ registered surveyor / professional engineer (as defined in the National Construction Code) certifying compliance of all drainage works with the approved design plans and the National Construction Code. The Works as Executed be shown in red on a copy of the approved plans. This plan must verify locations & sizes of all pipelines. Where the system includes an underground tank, a certificate of structural adequacy must be prepared and provided by a professional engineer (as defined in the National Construction Code).	To ensure ongoing compliance
On-site Detention System	Before the issue of an Occupation Certificate, the developer must: - provide a certificate from a professional engineer, (as defined in the National Construction Code) to verify the structural adequacy of the on-site detention facility and that the facility has been constructed in accordance with the approved Construction Certificate plans. - create a restriction on use under the Conveyancing Act 1919 over the on-site detention system naming the authority having the power to release, vary or modify the restriction referred to as Shoalhaven City Council and provide it to the Certifier as follows:	To ensure required on site detention infrastructure is provided and requirements registered on the title of the land.

	i) the property owner(s) are to undertake maintenance in accordance with the Construction Certificate approved On-Site Stormwater Detention System and Maintenance Schedule (application number to be referenced). ii) the registered proprietor of the lot burdened must not make or permit or suffer the making of any alterations to any on-site stormwater detention system on the lot(s) burdened without the prior consent in writing of the authority benefited. The expression 'on-site stormwater detention system' must include all ancillary gutters, pipes, drains, walls, kerbs, pits, grates, tanks, chambers, basins and surfaces designed to temporarily detain stormwater as well as all surfaces graded to direct stormwater to those structures.	
<u>Stormwater – Maintenance of Stormwater Infrastructure</u>	The approved stormwater design and any associated on-site detention must be maintained for the life of the development in accordance with the approved documents and maintenance programs.	To ensure ongoing compliance
Construction Certificate	A Construction Certificate must be obtained from either Council or a certifier before any building work can commence.	To ensure a 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 of 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 - of Conditions of 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 until all conditions of development consent have been met or other satisfactory agreements have been made with Council (i.e., a security).	To ensure conditions of consent are complied with or other satisfactory 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	To ensure an annual fire safety statement is prepared.

	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>	
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