

Submission on Shoalhaven Starches Modification 26

MP06_0228-MOD-26

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1. I recognise the jobs and economic activity the plant provides, but Bomaderry should not be asked to accept continual expansion in tactical slices without a clear and transparent account of the plant's long-term direction. Residents experience the operation as a whole, together with its incidents, disruption and loss of amenity.
2. I object to Mod 26 because the application has not demonstrated that the proposal remains substantially the same development, that its cumulative impacts have been adequately assessed, or that its risks can be effectively controlled.

Substantially the same development

3. The Shoalhaven Starches Expansion Project was originally approved under former Part 3A of the Environmental Planning and Assessment Act 1979. On 7 September 2018, an order was published declaring the project to be State significant development. The project approval is therefore taken to be a State significant development consent under Part 4 and may be modified under section 4.55.
4. Mod 26 seeks approval under section 4.55(2). It cannot be approved unless the consent authority is satisfied that the development, as modified, will remain substantially the same as the development originally approved. Where a proposed change varies too greatly, a new development application is required.
5. The application must therefore provide a meaningful qualitative and quantitative comparison between the whole development approved in 2009 and the whole development after Mod 26. It is not enough to rely on the claims that the land use is unchanged, the 300 ML ethanol limit will remain and the proposed structures resemble existing industrial infrastructure.
6. That comparison should address changes in footprint, height and built form, processing infrastructure, storage, wastewater, dangerous goods, freight and rail functions, floodplain occupation, riverbank and riverbed disturbance, biodiversity, Aboriginal cultural heritage and community impacts.
7. Mod 26 proposes substantial infrastructure across 13 development areas, including the main factory, former Dairy Farmers site, former Paper Mill, Environmental Farm, wastewater treatment plant and Shoalhaven River frontage. It is not simply a rearrangement of equipment within the existing factory.
8. The applicant should provide a transparent, quantified comparison between the development originally approved and the whole development after Mod 26. A separate account of the presently approved development would also show how successive modifications have cumulatively altered the project.
9. Without that comparison, the unchanged 300 ML ethanol limit is not, by itself, sufficient to establish that the development as a whole remains substantially the same.

Cumulative impact

10. The development has been progressively altered through numerous modification applications since 2009. The consolidated consent records changes involving flour, starch, gluten and ethanol infrastructure, boilers, packing facilities, a carbon dioxide plant, rail infrastructure, wastewater systems, dryers, storage and other works.
11. Each modification has been assessed separately, but the community experiences the resulting operation as one increasingly large and complex industrial system. Characterising each new structure as ancillary risks overlooking cumulative changes in scale, function, hazard profile and environmental reach.

12. The substantially-same assessment should identify the original approved development, the presently approved development and the development proposed after Mod 26. This would show both the immediate effect of Mod 26 and the cumulative changes made through successive modifications.

13. Each modification may be incremental. Their cumulative effect is not.

Same production limit, larger operation

14. Mod 26 repeatedly states that the approved production limit will not increase. That does not mean the scale, capacity or intensity of the operation will remain unchanged.

15. Mod 26 materially expands or alters:

- a. grain storage, unloading and handling;
- b. raw-material buffering and separation;
- c. finished-product storage;
- d. wastewater collection, treatment and storage;
- e. biogas infrastructure;
- f. chemical storage;
- g. rail maintenance and fuel facilities;
- h. maintenance infrastructure;
- i. the number, height and bulk of industrial structures; and
- j. the plant's footprint within the Shoalhaven River and floodplain environment.

16. These works may remove bottlenecks, reduce downtime and allow the plant to operate more continuously, efficiently and flexibly, even though the formal annual production limit remains unchanged.

17. The application should explain why such substantial additional infrastructure is required if the practical scale and intensity of the operation are not expected to increase.

Wastewater increase

18. Mod 26 proposes a major wastewater-treatment expansion, including a new 150 ML treated-effluent pond, conversion of three existing ponds into an approximately 80 ML anaerobic digester, additional membrane bioreactor and reverse-osmosis capacity, an equalisation tank, biogas treatment infrastructure and associated pumps, pipework and buildings.

19. Forecast wastewater inflows rise from about 11.5 ML/day to 15.6 ML/day, compared with about 8.1 ML/day assessed for the original expansion. The applicant should clearly explain what process changes are driving that increase and whether it reflects greater throughput, new product streams or a material increase in operational intensity.

20. Reduced irrigation volume does not necessarily mean reduced environmental impact. The assessment should compare total salt, nitrogen, phosphorus and contaminant loads against the site's existing constraints, including saline and sodic soils, nutrient accumulation, low permeability and shallow groundwater.

Pond integrity and dam-safety considerations

21. Annexure K identifies dam-safety considerations associated with the proposed 150 ML treated-effluent pond and conversion of existing ponds into an 80 ML anaerobic digester.

22. The report records historical stability issues involving dispersive soils and high water levels, batter instability and emergency sheet piling. It also records slumping, surface erosion and possible internal erosion or tunnelling.

23. Annexure K recommends a Desktop Consequence Category Assessment, followed by a formal Consequence Category Assessment if indicated. It identifies overtopping, seepage, internal erosion and rapid drawdown as risks requiring consideration.

24. These recommendations do not establish that the proposed structures are unsafe. They do show that matters affecting their classification, design and potential consequences remain unresolved.

25. Before determination, the applicant should complete the preliminary consequence-category process and provide enough information for the Department to understand the potential consequences of pond or digester failure. Matters essential to establishing feasibility and environmental acceptability should not be deferred entirely to post-approval design.

Riverbank stability and river works

26. Mod 26 involves direct works in and beside the Shoalhaven River, including excavation or preparation of the riverbed, placement of armour rock, extension of the revetment wall, piling, conveyor construction and the use of barges, cranes or other plant.

27. Annexure K describes its geotechnical work as concept-level and recommends further site-specific investigations to confirm design assumptions and foundation requirements.

28. The grain conveyor may be located within approximately one metre of the riverbank crest, near areas of variable ground conditions, historical instability, past failures and ongoing erosion.

29. The concept revetment analysis did not include the conveyor load, instead assuming that piles would transfer those loads into deeper strata. That assumption should be verified against the final conveyor, pile and foundation design.

30. Rock sizing, hydraulic performance and bioengineering treatment also remain unresolved. The Department should have enough information before determination to establish that the bank can support the proposed structures, construction will not worsen instability, and the revetment will not increase erosion.

31. The northern bank should not be treated merely as an industrial edge available for continuing occupation. It forms part of a connected river system, cultural landscape and community asset.

Aboriginal cultural heritage

32. The TfNSW Nowra Bridge Aboriginal Cultural Heritage Assessment confirms significant Aboriginal archaeological sensitivity within the wider Shoalhaven River corridor. It identified numerous Aboriginal sites and potential archaeological deposits and required permits, salvage work, management procedures and ongoing consultation for the bridge project.

33. That assessment does not prove that Aboriginal objects are present in the precise Mod 26 revetment footprint. It does demonstrate that Aboriginal objects and deposits survive within the Shoalhaven River landscape and that prior disturbance does not automatically remove archaeological sensitivity.

34. Because Mod 26 includes direct riverbed disturbance, the Department should not assume that an assessment focused on disturbed terrestrial factory land adequately addresses the archaeological potential of submerged or alluvial sediments.

35. Before riverbed works are approved, the applicant should address the revetment footprint, submerged or alluvial deposits, updated AHIMS information, Aboriginal consultation and whether further investigation or an Aboriginal Heritage Impact Permit is required.

36. An unexpected-finds procedure is important, but it should not substitute for reasonable investigation where existing evidence identifies archaeological sensitivity.

Grey-headed Flying-fox

37. The biodiversity assessment identifies the Grey-headed Flying-fox as part of an important national population and states that Mod 26 would remove approximately 0.08 hectares of habitat considered critical to the species' survival. It identifies the nearest known camp as approximately 1.5 kilometres away and concludes that the camp would not be indirectly affected.

38. Distance alone does not establish that indirect effects are unlikely. The assessment should explain how it considered construction noise and vibration, operational noise, artificial lighting, dust and the cumulative loss of nearby foraging habitat, particularly during sensitive breeding and rearing periods.

Flooding

39. The Mod 26 flood report identifies both incremental effects from Mod 26 and cumulative effects attributable to development modelled on Shoalhaven Starches-controlled land since 1990.

40. It predicts cumulative increases of up to approximately 0.05 metres in the 5% annual exceedance probability event, 0.1 metres in the 1% event and 0.2 metres in the probable maximum flood.

41. The incremental increases attributable to Mod 26 are smaller and predominantly occur on Shoalhaven Starches land, but they still add to the cumulative loss of floodplain storage and conveyance.

42. The cumulative scenario holds topography outside Shoalhaven Starches-controlled land constant, so it does not calculate the combined historical effect of every development across the wider floodplain. It nevertheless acknowledges that development within the plant has reduced flow paths and may divert water toward other parts of the floodplain.

43. The proponent's flood consultant did not identify a viable engineering measure to remove the modelled increase in peak flood levels. Community awareness and preparedness may reduce consequences, but they do not mitigate the hydraulic impact itself.

44. The main flood findings are presented without climate-change adjustments, although adjusted scenarios are included in an appendix. Climate-adjusted design levels should be incorporated into relevant design controls and conditions.

45. The assessment should also address the combined consequences of flooding and the storage or processing of wastewater, fuel, nitric acid, phosphorus oxychloride and other industrial materials.

46. If the Department accepts a residual hydraulic impact from Mod 26, that impact should not simply be transferred to the river system or the public. Any approval should require baseline and post-construction monitoring of flow conditions, scour, erosion and riverbank stability, with clear action thresholds. Where the development causes or materially contributes to deterioration, the proponent should be required to fund and undertake the necessary stabilisation, rehabilitation and maintenance works.

Hazard assessment and lived community experience

47. Shoalhaven Starches was already treated as a potentially hazardous industry under the original approval. The issue is whether the present operation, together with Mod 26, can satisfy the applicable risk criteria with effective safeguards.

48. HIPAP 4 primarily measures the statistical risk of incidents causing multiple fatalities. It does not provide a complete assessment of wider impacts on Bomaderry, including business disruption, road and rail delays, repeated emergency-service mobilisation, demands on volunteer and publicly funded responders, smoke, odour, sleep disturbance, window rattling, fear and loss of confidence.

49. Historical fires, explosions, structural failures, smoke and odour events should be used to test the hazard model. Where actual effects have extended beyond predicted contours or caused impacts not captured by the assessment, those differences should be investigated and explained.

50. The assessment leaves important matters to later design, including dust-explosion venting, nitric-acid handling, fire-water provision and final process-safety studies. The Department should distinguish between matters that may properly be finalised later and those needed before approval to establish that the proposal can meet the relevant risk criteria.

51. The Mod 26 documents are also inconsistent about whether 15 or 19 finished-product silos are proposed. This raises legitimate concerns about quality control and whether all technical assessments are based on the same final project description.

Asset integrity and maintenance

52. The Boiler 5 and 6 stack has been shortened from 54 metres to 49 metres because of corrosion. This follows other significant structural and equipment incidents at the plant, including the collapse of two grain silos in October 2024.

53. These events do not establish that the proposed Mod 26 infrastructure will fail. They do raise legitimate questions about inspection, maintenance, corrosion management and the long-term integrity of existing and proposed assets.

54. The application should identify the cause and extent of the stack corrosion, when it was detected, the inspections and structural certification undertaken, its remaining service life and whether comparable silos, stacks, tanks, gantries and other structures have been reviewed for similar deterioration.

55. Past structural and corrosion issues make asset integrity, inspection and maintenance a material assessment issue rather than a matter that can simply be assumed, particularly in a corrosive industrial and river environment.

Odour and air quality

56. Odour reduction was a fundamental environmental commitment supporting the original expansion approval.

57. The current air-quality assessment predicts compliance under average and second-highest quarterly scenarios, but predicts exceedances at six residential receptors when the highest quarterly emissions data are used.

58. The elevated result was still under investigation when the report was prepared. The Department should not assume that it is anomalous until its cause has been identified and further evidence shows that it is not representative of credible operations.

59. Before determination, the applicant should provide the outcome of that investigation, further representative sampling, modelling of credible adverse conditions, comparison with complaint and incident records, and evidence that the proposed Palmer cooler and boiler-stack arrangement will provide at least equivalent environmental performance.

60. The air-quality assessment should also confirm that the shortened Boiler 5 and 6 stack has been incorporated into the dispersion modelling and that the proposed Palmer cooler discharge arrangement reflects the stack's actual height and condition.

Noise

61. The Mod 26 noise assessment predicts that individual components can meet the adopted design goals if low-noise equipment and at-source controls achieve the assumed sound-power levels.

62. Those outcomes depend on equipment selection and mitigation not yet finalised. The same assessment identifies cumulative low-frequency noise and modelled exceedances of existing limits at sensitive receivers, while stating that Mod 26's individual contribution is comparatively small.

63. The relevant question is not only whether Mod 26 makes a small incremental contribution, but whether the whole development, as modified, can operate in compliance and protect residential amenity.

64. Any approval should translate the assumed equipment sound-power levels into measurable requirements, followed by independent post-commissioning verification.

Traffic, rail and public infrastructure

65. The traffic assessment considers vehicle movements, intersections and access, but does not provide a contemporary pavement-capacity or remaining-life assessment for Bolong Road.

66. No conclusion should be drawn that the road is unsuitable without a specific pavement investigation. Equally, the absence of obvious congestion does not establish that it can absorb the cumulative heavy-vehicle task without accelerated deterioration.

67. Counting trucks is not the same as measuring what they cost the road.

68. A proportionate pavement assessment should address existing condition, cumulative heavy-vehicle loading, predicted effects on pavement life and any appropriate contribution where the development materially increases road wear.

69. The freight task should include grain, ethanol, finished products, chemicals, fuel, waste, contractors and other transport supporting the whole modified operation. Public road-maintenance costs should not be transferred to local ratepayers where they are materially generated by private industrial activity.

70. Rail movements also affect the road network. The assessment should use actual and forecast rail frequency, train lengths and crossing times to quantify delays and identify workable emergency-access arrangements.

Visual bulk, town character and river amenity

71. Mod 26 would add three grain silos approximately 32 metres high, grain-handling structures reaching about 44 metres and a finished-product silo building approximately 44.5 metres high, substantially exceeding the 11-metre development standard. The availability of a variation does not remove the need to assess the scale and consequences of that departure.

72. The issue is not simply whether the new structures resemble existing industrial plant. The assessment must consider their cumulative effect on height, bulk, spread, landscape character and the visual relationship between the development, Bomaderry and the Shoalhaven River.

73. The plant is already visually dominant through its accumulation of silos, tanks, stacks, dryers, gantries and other infrastructure. Mod 26 would intensify that dominance through additional silos, tanks, buildings, conveyors and riverfront works.

74. The plant occupies a prominent position at the eastern entrance to Bomaderry. Its continuing growth creates an increasingly unattractive and unwelcoming gateway and contributes little to local identity, amenity or civic pride.

75. A river has two banks, but industrial development has progressively diminished the landscape and visual amenity of the northern bank. That cumulative loss should be assessed as an impact on place, amenity and community value, not dismissed because the land is industrially zoned.

Community values and social impact

76. People in Bomaderry want to feel safe. Many do not.

77. Repeated fires, explosions, odour events, smoke, alarms, emergency responses and industrial disruption have eroded community confidence.

78. A low calculated fatality risk does not necessarily mean a low community impact. The loss of a sense of safety is a real social impact even where an incident does not cause serious injury or death.

79. A comprehensive social-impact assessment should consider how the plant affects daily life in Bomaderry, including impacts on residents and businesses, access and rail delays, demands on emergency services, visual and river amenity, odour, noise, sleep, feelings of safety and confidence in the regulatory process.

80. Regional economic benefits should not be used to discount impacts borne disproportionately by the host community.

Determination requested

81. I submit that Mod 26 should not be approved in its current form.

82. The Department should first determine whether the material provides a sufficient factual basis to find that the development, as modified, would remain substantially the same development.

83. If that finding cannot properly be made, Mod 26 should not be approved through section 4.55 and the proposed works should be subject to a fresh development application and holistic environmental assessment.

84. Alternatively, determination should be deferred until the applicant has supplied the information necessary to assess the unresolved matters identified above. If that information materially changes the proposal or its predicted impacts, it should be publicly exhibited.

85. I request that each substantive issue raised in this submission be addressed in the Department's assessment report and statement of reasons.

86. Before determining Mod 26, the Department should seek clarification or further assessment on:

- a. whether the development as a whole remains substantially the same as that approved in 2009, including changes in footprint, height, storage, wastewater and operational infrastructure;**
- b. the reason for the substantial increase in wastewater generation and the consequences for pond safety, soil, groundwater and long-term wastewater management;**
- c. whether the conveyor, grain silos and riverbank works are geotechnically feasible, including structural loads, erosion and revetment design;**
- d. whether the riverbed and revetment works have been adequately assessed for Aboriginal cultural heritage and aquatic impacts;**
- e. the unresolved odour results and whether the proposed hazard controls can meet the applicable criteria;**
- f. cumulative flood, traffic, rail-access and emergency-response impacts; and**
- g. the cumulative visual and social impacts on Bomaderry residents, businesses and the northern riverbank.**

87. Should Mod 26 be approved, the consent should clearly define what is authorised and include practical safeguards addressing final riverbank design, Aboriginal heritage, pond safety, asset inspection and maintenance, odour, noise, hazard controls, emergency planning, rail-crossing delays, climate-adjusted flood levels and rehabilitation of disturbed riverbank areas. It should also require monitoring and remedial works for any riverbank erosion, scour or instability caused or materially worsened by the development, supported by an appropriate financial assurance.

88. Matters essential to establishing whether the development is safe and environmentally acceptable should be resolved before approval, rather than left entirely to later design.

89. Bomaderry should not be asked to accept further expansion on the promise that unresolved risks will be dealt with later. Environmental assessment should establish before approval that a proposal is lawful, its likely impacts are understood and its risks can be effectively controlled. Mod 26 has not yet met that standard.

References

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