RECORD OF DEFERRAL

SYDNEY WESTERN CITY PLANNING PANEL

DATE OF DEFERRAL	Monday, 8 March 2021
PANEL MEMBERS	Justin Doyle (Chair), Angus Gordon, Bruce Thom, Wendy Waller and Nathan Hagerty
APOLOGIES	Hannah Power and Doug Lord
DECLARATIONS OF INTEREST	Justin Doyle: The Panel Chair disclosed that he had represented the opposing party in unrelated property Supreme Court litigation concerning land in a different part of Sydney, but did not see that work as likely to impact on his assessment of the DA such as to generate a conflict of interest. Peter Harle: declared a conflict of interest as this proposal was discussed at the council meeting and he participated in the discussion.

Public meeting held by teleconference on 8 March 2021, opened at 12:08pm and closed at 1:52pm.

MATTER DEFERRED

2018SSW027 – Liverpool – DA-611/2018 at 146 Newbridge Road, Moorebank – Construction and operation of a Marina (Georges Cove Marina) (as described in Schedule 1)

REASONS FOR DEFERRAL

Determination

The panel voted unanimously to defer the determination of the matter until further information as identified below is supplied by the Applicant to address the outstanding issues of:

(a) Flood risk;

(b) Bank protection measures; and

(c) SEPP 55 compliance.

When this information has been received, the panel will determine the matter electronically.

The Panel adjourned following the public meeting to deliberate on the matter and formulate a resolution.

Outstanding issues

1. The Panel accepts the assessment contained in the assessment report to the effect that the proposed marina use of the site is compatible with existing and anticipated surrounding land uses located around Newbridge Road to the north and Georges Fair residential estate to the west. It will offer a useful facility for boat users of the George's River and will add to the commercial and social life of the Moorebank area. Notably the proposal has a degree of local support with four public submissions in favour of the development including one from the Moorebank Residents Action Group.

2. There remain however three issues about which the Panel remain to be satisfied based on the material presently available, having regard to the apparent risks, applicable instruments and controls.

3. Those issues which the Panel requires to be addressed before the DA is determined are in summary:

(a) Flood risks

1. The proposed wet berth facility has been designed to cater for 186 watercraft (including casual berths) in the form of a series of connected floating pontoons. The Council assessment report indicates the facility will include 2 vessels of up to 20 metres long, with a variety of smaller lengths.

2. The location of that facility has been planned within the anticipated flood channel for a substantial overbank flooding events. The various flooding reports that form part of the application confirm that this section of the Georges River has regularly been subject to such events.

3. The events which the available modelling and past experience predict are characterised by large volumes of water flowing over the site of the proposed wet berth at a significant velocity. During the 100 yr ARI event the surface of the river is modelled to rise in the order of 5.6 metres with consequential substantial lateral spread of the river bank. That predictable risk based on available modelling translates to a 1% chance that such an event will happen every year, or a cumulative risk of over 45% of such an event being equalled or exceeded during a project life of the facility of say 60 years. That risk is expected to increase with the effects of climate change. Flooding events involving a lesser rise in the river surface level will occur with greater frequency.

4. The location of a commercial scale wet berth marina located up river in a flood channel subject to dramatic sudden rises in river levels with associated impacts and risks would be rare if not unique in NSW, and requires special attention (having regard to the regulatory framework detailed below).

5. The proposal to secure the pontoons and vessels during a major flood event is not clearly defined but anticipates the use of either flexible lines that extend to the basin bed which will stretch when flood loads occur, or that will be attached to pylons driven into the base of the basin which will have to be of a sufficient height to allow for the anticipated near 6 metre potential rise of the river surface during the 1% event however there appears to have been no consideration of how a rarer event would be managed. To this end it is noted that the anticipated rise in a PMF event would be 10.2 metres.

6. At present the extent of the detail of that design that the Panel could locate is limited to the following description:

> "*The marina pontoons and pile supports would be designed to cater for flood levels, flood flows and debris imposed by the 100 yr ARI flood. A back up anchor pile and chain system would hold in place the marina pontoons. All craft could be readily tied to the chain system with quick lock fixtures when a severe flood warning was received*."

   No working detail or management plan is supplied

7. Given the factors identified above, a typical anticipated detail for the worst case portion of the wet berth indicating the proposed design of the marina restraints taking into account a preliminary analysis of the potential loading under flood events is warranted. The design should disclose how it would behave in practice, and the point at which it would fail. Notably, the 100 yr ARI has a relatively high cumulative probability of being equalled or exceeded during the life of the facility.

The consequences of failure of such measures (to the facility, the moored boats, and downstream structures) can be expected to be very high to extreme.

8. In addition to the high value of 186 boats and infrastructure with substantial risk of damage if the flood mitigation measures were to fail, experience points to the potential for dislocated vessels and sections of the marina structure making a tortuous way down the winding river through areas of flooded houses, with the potential for further damage. Presumably that situation will be considered in the design information.

9. The severity of the consequences of a potential failure are relevant within the risk-based approach required by the terms of the Coastal Act and the SEPP.

10. The engineering of the solutions to the flooding risks will present major construction design challenges, and will need to rely upon a flood event management plan involving individually securing up to 186 privately owned vessels to survive the flood during bad weather, which may or may not be practical. No details of that plan are presently available. A statement that boats will be attached to chains says nothing about how that system will work with such large rises in water level.

11. The Panel remains to be satisfied that a wet berth facility of the scale proposed can be safely and appropriately designed for this location having regard to those matters. Given their sensitive location, the appearance and construction impacts of the required engineering structures that would be necessary to render the facility safe must also be considered (such as piles in excess of 6 metres high extending into the bed of the marina to a sufficient depth to withstand the anticipated lateral loads).

12. The Panel is of the view that more detailed engineering information about the proposed wet berth ought to be supplied at DA stage, because the consequential design constraints may argue for the wet berth component of the facility to be significantly modified, curtailed or removed. A typical anticipated detail for the worst case portion of the wet berth would assist, together with information as to the length, height and number of piles required.

13. In that regard the Panel observes that most, if not all pontoon systems currently in use in NSW seem to be designed for far less exposure to lateral forces and the artists impressions of the floating marina appear to show no piles. A large number of piles in excess of 6 metres in height may significantly change the aesthetic appearance of the project.

14. From a regulatory perspective, Coastal SEPP mapping indicates that a substantial portion of the wet berth section of the marina and all of the rock revetment along the riverbank fall within in the "*coastal zone*" for the Georges River. Overlapping parts of the site are separately mapped as a "*coastal environment area*", "*coastal use area*", as well as a "*coastal wetlands proximity area*" so as to invoke the requirements of clauses 11 – 14 of *SEPP (Coastal Management) 2018 (***Coastal SEPP***)* and applicable provisions of the Coastal Management Act 2016 (**Coastal Act**) to consider coastal hazards.

15. In particular, clause 15 of the Coastal SEPP requires the Panel to be satisfied "*that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land*" before approving the development.

Without the identified engineering for the flooding risks being sufficiently identified, the Panel is unable to discharge that obligation.

16. The Panel's responsibilities in that regard are higher in the present circumstances where no Coastal Vulnerability Area has yet been mapped for this site, as explained by *Planning Circular PS 19-006* which states:

> "*However, despite this (no vulnerability mapping), clause 15 of the Coastal Management SEPP requires all consent authorities, in the context of considering proposed development in the coastal zone generally, to be satisfied that the proposed development is not likely to cause increased risk of coastal hazards on that land or other land*".

17. The relevant parts of the *Coastal Management Act* include a definition of coastal hazards: "*erosion and inundation of foreshores caused by tidal waters and the action of waves, including the interaction of* those *waters with catchment floodwaters*" (s4(g)). Further there is a need to consider the '*Objectives of the Act*' which include "*to mitigate current and future risks from coastal hazards, taking into account the effects of climate change*" (s 3(f)), and "*to encourage and promote plans and strategies to improve the resilience of coastal assets to the impacts of an uncertain climate future including impacts of extreme storm events"* (s3(i)*).*

18. Consideration of the effects of climate change in the flood assessment should therefore have regard to the CSIRO modelling that forecasts more intense rainfall events with flood potential for eastern Australia; this uncertainty is not discussed in the submitted documents.

19. Lastly, there have been a number of notable marina failures on rivers due to flooding events such as that in Mooloolaba in the early 1980s and the impact of devastating floods in Queensland in 2011 which highlight the risks in issue here (see photograph following):

While those marinas were in estuaries and harbours, the consequences of a wet berth marina in a flood channel are comparable.

20. To the best of the Panel's knowledge in NSW marinas of the size proposed tend to be located in harbours and estuaries, or in sheltered areas of rivers such as at "The Gut" at Brooklyn on the Hawkesbury. It would therefore be helpful to the Panel if the applicant could identify any other examples of similar sized marinas located in similar situations (well up-river and subject to major flooding impacts such as those identified as "High Hazard" in the documents accompanying this application). The history of any such marinas when subjected to major flood events would be

informative, as would design techniques used to ensure floating marina units and their tethered craft were able to survive major flood events.

21. These constraints to do not affect the dry berth portion of the facility for which the engineering appears to be sufficiently defined and appropriate for DA level. The flood studies seem to reasonably identify the building, although potentially subject to significant inundation, to be in a "backwater" area and able to be suitably designed to survive flood events. There are therefore no further details required in regard to the "Dry Stack" and other marina buildings.

22. Presumably any flood management plan proposed could also consider whether any signage or other measures are needed for the carpark, but the greater ease for removing cars above the flood level means that aspect of flood management is easier to resolve.

(b) Bank protection measures

23. The design for the stone revetment forming the marina basin perimeter currently provided in only a concept form requires further elaboration.

24. One significant issue of concern is the indication in the DA reports that the Georges River is up to 8 metres deep in the vicinity of the proposed marina. In that context, information is required as to how the toe of the revetment will integrate into the underwater slope of the riverbed, while staying within the property boundaries, and without adversely impacting on the area of river outside the boundary. The design should indicate whether the mean water level will alter in relation to its intersection with the revetment and property boundary. If it is proposed that the structure and toe are to extend outside the defined property boundary so as to maintain the mean water level intersection with the revetment in the current boundary location, issues of owner's consent may arise (with attention to the reasoning of Commissioner Brown recorded in *Moorebank Recyclers Pty Ltd v Benedict Industries Pty Ltd* [2018] NSWLEC 1089).

25. Even within minor flooding the crest of the embankment (shown as +1.9m AHD in the application documentation) is likely to be overtopped with water flowing both into the marina area and out of the area over the embankments on both the upstream and downstream sides of the proposed marina entrance channel. It would therefore be of assistance to the Panel if the applicant would provide information that demonstrates the crest design is such that it can withstand overtopping events. The concern being that a failure of the crest could potentially adversely impact on the adjacent property and may compromise the flood planning for the wet berth.

26. Typical cross sections addressing the toe crest and boundary location issues would be helpful. The cross section(s) should extend out to at least mid-river so the underwater slopes and toe integration and likely stability can be understood. During the Public Session the applicant's engineering consultant indicated that recent survey data existed. It would be of assistance if this could be made available to enable it to be compared with the riverbed contours contained in the reports that formed part of the application which suggested that in places the Riverbed extended down to -8m in a region in the vicinity of the proposed revetment wall.

27. In regard to the upstream and downstream ends of the revetment it would be helpful if there were detail as to how these ends are to be managed. In identifying this there are two separate issues. The first is in regard to the provision of wall "returns" into the property to ensure the revetment is

not outflanked, but the second is in regard to the "end effects" on the adjacent properties. End effects are a common issue where bank protection measures are constructed. They occur where there is a discontinuity between a "hard" bank protection and a natural bank on an adjacent property. It would be helpful to have information on how the likely end effects are to be managed to ensure the adjacent properties are not adversely affected.

(c) SEPP 55

28. The site adjacent to a river has been partially filled in the past with waste materials so that its contamination history must be carefully understood in the assessment of a project involving major works and a change of use. Potential adverse impacts of disturbance both during and after construction of the marina should be fully evaluated.

29. The Council assessment report provides conflicting advice as to whether the Panel can lawfully approve the proposed development on the basis of the information submitted.

30. On the one hand the report advises that "*Council's Environmental Health Section has raised no objections with the submitted documentation*" on the basis that "*sufficient information has been submitted for Council to be satisfied that Clauses 7(1), 7(2), 7(3) and 7(4) of State Environmental Planning Policy No. 55- Remediation of Land have been addressed … subject to conditions of consent*."

31. On the other hand, the report refers to legal advice to the effect that because the audit report's conclusions are "*contingent upon numerous and varied additional reports to be prepared"* with numerous *"data gaps"* observed by the auditor, the Panel cannot reach the degree of satisfaction required by clause 7(1) of SEPP 55 to lawfully approve the development.

32. The Panel's own consideration of the SEPP 55 reporting agrees that further clarification of the contamination risk that can presently be identified is required, albeit that the Panel expects that the known issues can be resolved.

33. Of particular assistance would be a concise history of use of the site extracted from the existing conflicting material that highlights changes in use, more precisely describes what is known about the levels of contamination and/or treatment. The Panel would like to see and, and a long term environmental management plan that incorporates flood behaviour and potential associated impacts on stockpiles (both existing and those proposed as part of the staging of the development).

34. Presumably, that additional information will address:

    a) Clarity in the proposed RAP as to how foreseeable contingencies (such as the results of testing of parts of the site which are presently inaccessible) will be addressed, sufficient to determine when a modification to the consent would be required.

    b) Clarification of the proposed "management measures" averted to in the EMM EIS of May 2019 which the Panel understands should be undertaken prior to commencement of remediation works (see 6.3.8, p. 116).

    c) An earthworks plan which addresses potential impacts of any necessary stockpiling during remediation,

d) The data gap in Area 2 and other fill areas in relation to asbestos in soil, ground water quality along south boundary and soil gas monitoring, and

e) Whether a 'long term environment management plan' (LTEMP) is necessary that considers flood behaviour and potential flood impacts on stockpiles.

Additional observations

35. Concerns raised traffic safety, road congestion and parking have been noted by the assessment report to be adequately managed, subject to the appropriate signalling of the intersection of Newbridge Road and Link Road being further investigated by a deferred commencement condition.

36. Notably, with that condition imposed, TfNSW raises no objection to the proposed development for the purposes of clause 104 of SEPP Infrastructure 2007. Use of Newbridge Road by construction traffic has been found to be acceptable, noting that access will improve when construction of the link road bridge is complete. Indeed, traffic impacts from the marina would be expected to be less than the heavy vehicle movements associated with the existing recycling centre and quarry use. Taking those matters into account, the considerations of clause 101 are seen to have been sufficiently addressed.

37. In that regard bank stabilisation works that are proposed as part of the development, with enhancement of the estuarine vegetation on the inside of the revetment wall to be encouraged as part of those works is in part to be protected by large rocks placed along the foreshore inside the "harbour". With the measures outlined in a Vegetation Management Plan under the VPA for the site, the Panel accepts the Council's advice that the biodiversity of the Georges River will be adequately protected and enhanced as the site is rehabilitated.

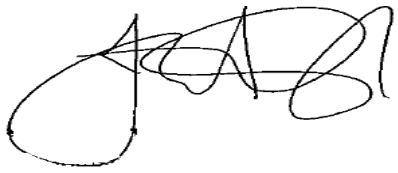
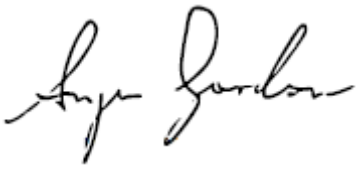
38. Notably the consent conditions will implement and be consistent with the General Terms of Approval issued by NRAR as part of the integrated development process associated with the *Water Management Act* 2000.

39. With those matters satisfactorily addressed the Panel agrees with the Council assessment that (subject to the issues of flood risk identified above being resolved) considerations raised by Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment have been addressed.

40. There are disputed conditions identified by the Council assessment staff.

41. One area of dispute relates to a requirement to obtain in-principle approval for the installation of traffic control signals at the intersection of Brickmakers Drive and new Link Road from TfNSW. With the time allowed by the deferral of determination of the DA, clear advice as to the position of TfNSW as to the required timing of the intersection works should be able to be sought and obtained.

42. Another issue relates to the property boundaries where a nominated LA10* noise level as emitted from the licensed premises is to be achieved. In general, the Panel would expect that noise impacts would be appropriately regulated for all residential neighbours, but anticipates that further discussions will lead to agreement as to the terms of the acoustic conditions.

PANEL MEMBERS	
 Justin Doyle (Chair)	 Angus Gordon
 Bruce Thom	 Wendy Waller
 Nathan Hagerty	

SCHEDULE 1		
1	**PANEL REF – LGA – DA NO.**	**2018SSW027 – Liverpool – DA-611/2018**
2	**PROPOSED DEVELOPMENT**	Construction and operation of a Marina (Georges Cove Marina). The development consists of: • A maritime building which will house a dry berth facility providing 250 berths, a function centre, tourist, entertainment, recreation and club facilities, a petrol storage tank (60,000 litres) and a diesel storage tank (60,000 litres). • A wet berth facility for 186 craft (including casual berths) which will consist of a marina basin, rock protection of the basin and foreshore, including embellishment and revegetation of the river foreshore, construction of a navigation channel, construction of public recreational facilities on the foreshore, floating berths and walkways, fuel pumping facilities, sewage pumpout facilities and emergency berth access. • Construction of three external car parking areas and basement car park providing a total of 637 car spaces. • A private marina clubhouse. • Associated works and support infrastructure including power, water and sewerage.
3	**STREET ADDRESS**	LOT 70 DP 1254895 146 NEWBRIDGE ROAD, MOOREBANK NSW 2170
4	**APPLICANT/OWNER**	BENEDICT INDUSTRIES PTY LTD
5	**TYPE OF REGIONAL DEVELOPMENT**	Designated development - marina or other related land and water shoreline facilities
6	**RELEVANT MANDATORY CONSIDERATIONS**	• Environmental planning instruments: o State Environmental Planning Policy No 19 – Bushland in Urban Areas o State Environmental Planning Policy No.33 – Hazardous and Offensive Development o State Environmental Planning; Policy No.55 - Remediation of Land; o State Environmental Planning Policy (Coastal Management) 2018 o State Environmental Planning Policy (Infrastructure) 2007; o State Environmental Planning Policy – (State and Regional Development) 2011 o Greater Metropolitan Regional Environmental Plan No. 2 – Georges River Catchment; o Liverpool Local Environmental Plan 2008 • Draft environmental planning instruments: Nil • Development control plans: o Liverpool Development Control Plan 2008 o Part 1: General Controls for All Development o Part 2.10 – Moorebank East (Benedict Sands) • Planning agreements: Nil • Provisions of the *Environmental Planning and Assessment Regulation 2000*: Consideration of the provisions of the National Construction Code of Australia • Coastal zone management plan: Nil

		• The likely impacts of the development, including environmental impacts on the natural and built environment and social and economic impacts in the locality • The suitability of the site for the development • Any submissions made in accordance with the *Environmental Planning and Assessment Act 1979* or regulations • The public interest, including the principles of ecologically sustainable development

7	**MATERIAL CONSIDERED BY THE PANEL**	• Council assessment report: 23 February 2021
		• Additional information received: 3 March 2021
		• Written submissions during public exhibition: 8
		• Verbal submissions at the public meeting:
		  ○ Fiona Macnaught on behalf of Moorebank Residents Action Group and Bozena Hochwaller
		  ○ Council assessment officer – Boris Santana
		  ○ On behalf of the applicant – Luke Walker, Ernest Dupere, Ian Swane and Mark Tooker

8	**MEETINGS, BRIEFINGS AND SITE INSPECTIONS BY THE PANEL**	• Briefing: 9 September 2019
		  ○ Panel members: Justin Doyle (Chair) and Bruce McDonald
		  ○ Council assessment staff: Boris Santana and George Nehme
		
		• Site inspection: 9 September 2019
		  ○ Panel members: Justin Doyle (Chair) and Bruce McDonald
		  ○ Council assessment staff: Boris Santana and George Nehme
		
		• Final briefing to discuss council's recommendation**:** Monday, 8 March 2021
		  ○ Panel members: Justin Doyle (Chair), Angus Gordon, Bruce Thom, Wendy Waller and Nathan Hagerty
		  ○ Council assessment staff: Boris Santana and George Nehme

9	**COUNCIL RECOMMENDATION**	Refusal
10	**DRAFT CONDITIONS**	Nil