

## Attachment 6

### Response to Law & Planning (Mr Grant Long) submission to the JRPP

Note: Council responses to the points made in the submission are in **bold**.

Planning must always start by consideration of site capability and suitability.

This application has fallen down in that these fundamental matters were not addressed in the planning, design and assessment phase.

As a result, there have been amendments and "band-aid" solutions put in place.

These can never overcome the fundamental failings of the site and thus put the Council and the community at risk. I will take the Panel through a number of matters that support this fundamental premise.

#### Flooding

Section 733 of the Local Government Act 1993 provides Council with a statutory indemnity from liability in relation to advice, acts or omissions in relation to the flood liability of land.

Such indemnity may be invoked by a Council in circumstances where such advice, acts or omissions were made in good faith.

By reason of s.733(4), a Council is taken to have acted in good faith if the advice, act or omission was made substantially in accordance with the relevant manual, in this case the NSW Floodplain Development Manual 2005.

In other words, failure to comply with the requirements of the Manual in regard to flood liable land is an act of bad faith, will remove the statutory indemnity and thereby expose the Council to liability.

**Response: The interpretation of the statutory indemnity is correct, however it is important to note that the NSW Floodplain Development Manual is intended to provide policy advice use in high level strategic documents to ensure effective management of the floodplain. Strategic documents in this context refer to floodplain risk management plans, development control plans and policies. It is not intended to be used for consideration of individual development applications. The assessment of the development application has given proper regard to the relevant matters contained within the Floodplain Development Manual.**

With this in mind, let's examine the proposal and Council's response.

About one third of the site falls within the definition of High Hazard as defined in the NSW Floodplain Development Manual 2005. This is as follows:

*High hazard - possible danger to personal safety; evacuation by trucks difficult; able-bodied adults would have difficulty wading to safety; potential for significant structural damage to buildings.*

This alone would not preclude *development* of some of the site, but clearly represents a significant constraint to development of all of the site.

**Response:** It is assumed that Mr Long's determination of 'flood hazard' is based upon facts relating to flood depth on the land alone. Flood hazards determined based on flood depths alone are correctly termed 'Provisional Hydraulic Hazard'. This is the starting point in determining the Flood Hazard, but definitely does not encapsulate the whole process. Determination of Flood Hazard is a merit based assessment and details in relation to how Council has determined flood hazard are contained within the initial flood report (see Attachment 5). Based upon Council's Flood Hazard assessment, the site is wholly classified as low hazard.

How is this constraint addressed through the application and assessment?

**Response:** The flooding constraint was addressed by undertaking an assessment in accordance with Council's Development of Flood Prone Lands Policy. The assessment of the development in accordance with policy is, in very simplistic terms, a joint consideration of Flood Hazard and Type of Development by use of the 'Flood Assessment of Development' matrix shown below.

#### FLOOD ASSESSMENT OF DEVELOPMENT

| TYPE OF DEVELOPMENT                 | FLOOD HAZARD CATEGORIES  |                          |                      |                          |                           |                       |
|-------------------------------------|--------------------------|--------------------------|----------------------|--------------------------|---------------------------|-----------------------|
|                                     | LOW HAZARD FLOOD FRINGE  | LOW HAZARD FLOOD STORAGE | LOW HAZARD FLOOD WAY | HIGH HAZARD FLOOD FRINGE | HIGH HAZARD FLOOD STORAGE | HIGH HAZARD FLOOD WAY |
| NEW DEVELOPMENT                     | PROHIBITED               |                          |                      |                          |                           |                       |
| DEVELOPMENT IN NON-URBAN ZONES      | USUALLY PERMITTED        |                          |                      |                          |                           |                       |
| DEVELOPMENT IN EXISTING URBAN ZONES | CONSIDERED ON ITS MERITS |                          |                      |                          |                           |                       |

(NB See additional restrictions in this policy)

The current development was assessed to be 'New Development' and a combination of 'Low Hazard Flood Storage' and 'Low Hazard Flood Fringe'. The policy indicates the development would either be 'usually permitted' or 'considered on its merits' and support for the development was considered appropriate.

The Application is supported by a letter of 29 March 2011 from Cardno (NSW/ACT) Pty Ltd. The assumption of the Cardno letter is that:

"Acting upon your instructions we have investigated the ocean inundation level against which protection must be provided for this development proposal . . . This has not been a detailed study, but rather it has drawn information from other reports and publications in order to provide a realistic basis for this assessment."

In other words, the Cardno letter is nothing more than a desktop assessment.

**Response:** It is considered that no additional modelling or detailed studies were required to assess the development. Drawing on the relevant contents of various reports and publications yielded a 'realistic basis for assessment' as stated. Primarily, this commentary relates to the establishment of flood planning levels – which requires collective consideration of the Tuggerah Lakes Flood Study (1994), Council's Development of Flood Prone Lands Policy, NSW Floodplain Development Manual, and the Floodplain Risk Management Guidelines. The Floodplain Risk Management Guidelines clearly confirm this approach is recommended and satisfactory. The Cardno assessment included significant investigation of wind generated lake waves using modelling techniques/procedures.

The Cardno letter correctly identifies most of the *relevant* flood heights and sea, and thereby lake, *level* rise scenarios. *However*, it fails to consider the increase in rainfall intensity, which could be as much as 30%. In other words, a 1 % AEP (1 in 100 year) storm *event* and thereby flood *event* at the year 2100 could be 30% larger than the 1 % AEP storm *event* now. Let's call this a data gap and set it aside for now.

**Response:** It is acknowledged that changes in rainfall patterns has the potential to impact upon peak flood level, however it must be stated that the science in relation to these effects has not been developed to the extent where consideration is appropriate or possible on an individual development site basis. The inference that increases in rainfall intensity are directly proportional to the size of a flood is not an accurate depiction of the likely outcome as it fails to consider any type of loss model (i.e. rainfall that is not converted to runoff).

The Floodplain Risk Management Guidelines ask for sensitivity analyses to be undertaken for 10%, 20% and 30% increases in rainfall intensity when undertaking flood modelling. The total catchment area upstream of The Entrance is 740km<sup>2</sup>, and includes three interconnected lakes and three major rivers. A flood study to specifically consider potential increases in rainfall intensity is considered to be an unreasonable request considering the costs associated with such a study.

The conservative application of the sea level rise benchmarks and 500mm freeboard to habitable floor levels is considered adequate to overcome the unquantified effects of potential increases in rainfall intensities. This use of the freeboard in this manner is specifically supported by the Floodplain Development Manual and the Floodplain Risk Management Guidelines.

Armed with this information, Cardno state the following:

"Annexure 2 shows the proposed development plans for the site. They include a perimeter fence and raised land levels. The perimeter fence will prevent these waves from entering the site and must extend about 25m along the southern and northern sides of the site" (emphasis added)

Wave heights at the site are estimated by Cardno to be in the order of 0.9m.

In other words, the solution to the issue of flooding was presented to Cardno as a fait accompli.

That solution is landfill and barrier, two solutions long thought as unacceptable. The landfill and fencing is at least partly evident on Architectural Plan DA 10 which shows sections through the site.

What does the Manual say about the assessment of filling and fencing proposals?

Appendix J2.1.2 of the Manual notes that filling and fencing will change flood behaviour.

**Response:** The Manual does not 'note that filling and fencing will change flood behaviour'. The Manual indicates that filling and fencing have the potential to impact upon flood behaviour.

In order to assess this, the cumulative impact of a number of similar proposals needs to be assessed. This has not been done.

**Response:** The clause referenced relates to the preparation of Floodplain Risk Management Plans – not an assessment of individual development applications. Reading the clause in its entirety requires the preparation of a Floodplain Risk Management Plan to cumulatively consider the impact of filling and fencing with a specific goal of placing limitation on the physical attributes and extents.

Under the sub heading of 'cumulative effects of the development' in the flooding assessment, the following comment was offered - 'The applicant has minimised the extent of filling, however the development will result in a minor loss of flood storage, similar to the relatively recent subdivision to the north'.

The filling proposed is mostly contained within the flood fringe area as defined by the current flood study (above 1.8m AHD), where such filling is accepted as not having any significant effects upon flood characteristics. The minor remaining amount of fill located within the flood storage area is considered to have negligible impact upon flood levels, even on a cumulative scale, given the size of the floodplain. The draft Tuggerah Lakes Floodplain Risk Management Study contains a sub section discussing fill and aligns with this assessment.

Also, what will be the impact on adjoining properties of the deflection of 0.9m high waves from the perimeter retaining walls and fencing? Could those deflected waves amplify the damage to buildings on adjoining lands?

**Response:** The draft Tuggerah Lakes Floodplain Risk Management Plan contains a subchapter dedicated to the discussion of wind generated lake waves, and undertakes a wave vulnerability assessment. This assessment does not identify The Entrance North as a vulnerable location.

The closest comparison is the adjoining suburb of The Entrance and the assessment indicates the vulnerability for both wave impact and wave runup is minor. The assessment does not consider the impact of climate change, including predicted sea level rise predictions. The specific consideration of wind generated lake waves is considered by Council to be beyond the current scientific knowledge in relation to climate change effects, specifically in relation to the severity and frequency of extreme wind events.

We simply don't know because there has been a fundamental failure to consider this as part of the application or assessment process.

**Response:** Cardno (on behalf of the applicant) have undertaken a modelling exercise in an attempt to quantify the likely affects of sea level rise upon wind generated lake waves specifically in relation to the development. The results of this modelling were reviewed but not relied upon in providing support for the application. While the results were not relied upon, the conclusion could not be ignored and the recommended mitigation works were supported to remain based upon the precautionary principle.

As a result, there has been a fundamental failure to comply with the requirements of the Floodplain Development Manual.

Further evidence of this can be seen in the proposed conditions of consent.

Condition 13 requires the preparation of a site specific Flood Emergency Management Plan (FEMP).

Such a condition is completely at odds with State Emergency Service Policy. As noted at Appendix N7.2 of the NSW Floodplain Development Manual 2005:

"In a naive attempt to provide some sort of protection to council when it approves a DA in a flood risk area, some councils are imposing development consent conditions requiring site specific plans. Some consent conditions require the applicant to seek SES endorsement of their plan. Taking into account the preceding discussion about the limitations of private plans, the SES is opposed to this approach"

**Response: The suitability of the development was assessed against Council's Development of Flood Prone Lands Policy, and the Flood Hazard assessment in accordance with the Floodplain Development Manual.**

**No reliance was given to the preparation or implementation of the Flood Emergency Management Plan discussed in condition 13 during determination of Flood Hazard, thus no reliance was given upon the Flood Emergency Management Plan in deciding whether to support the development.**

Why is the SES opposed to such an approach?

"Conditioned private flood plans will only be prepared to secure the development consent, not because of a genuine commitment to taking some personal responsibility for risk management." (emphasis added)

And further:

"There is no workable process for quality control of private plans and the SES has no choice other than to refuse requests by an applicant to review their plan"

Condition 13 proposes that the FEMP be prepared in consultation with the SES.

**Response: The extracts referenced above do not provide a complete picture of the SES Policy or Floodplain Development Manual discussion on site specific plans. The manual states *"The SES supports the idea of owners and occupiers of premises in areas of flood risk having a plan for what they should do to prepare for and respond to flooding. To this end, the SES promotes this practice in the community and business education activities and continues to develop information to guide the community when they choose to prepare a private flood plan"*.**

**To satisfy the requirements condition 13, an experienced consultant will only need to review the contents of the local SES website and have regard for the Flood Safe brochures.**

Finally:

"Council's should be aware that the issue of private flood plans has been tested in the NSW Land and Environment Court and the policy of the SES has been recognised as valid."

Condition 13 also proposes that the FEMP be certified by the Accredited Certifier. With respect to accredited certifiers, I fail to understand how they could ever have the qualifications or experience to approve such a plan.

**Response: This point is accepted as valid. A change to the wording of the condition is recommended in the main body of the report to address this concern. The intention of certification was to ensure that any *"recommendations for amendments/additions to the development plans to facilitate ease of evacuation"***

**were undertaken prior to the issue of the Construction Certificate. With the plan being prepared by a suitably qualified and experienced consultant, the certifier does not need to approve the plan.**

Armed with this information, one must ask the rhetorical question, how could such a condition be drafted, let alone be put forward to be imposed on this development?

The answer is that there has been a fundamental failure to understand the nature of the constraint and the proposed response.

To wrap up the issue of flooding, some key principles from the Floodplain Development Manual:

*Any form of response planning, but private planning in particular, is unreliable as a long-term risk mitigation measure.*

*For convenience, the various measures have been described in isolation. However, a fundamental principle of good floodplain risk management is that risk management measures should not be considered either individually or in isolation. They must be considered collectively from within the all-embracing framework of a floodplain risk management study that allows their interactions, their suitability and effectiveness, and their social, ecological, environmental, cultural and economic impacts to be assessed on a community wide basis.*

The preparation and assessment of this development application in regard to the issue of flooding is completely at odds with the Manual and on that basis alone, would justify the Panel refusing this application.