

## New Dunedin Hospital

### Outpatients Building Stage 2

#### A further review of flood provisions

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19 July 2022

1. EPA on behalf of the Panel has invited me, in light of my earlier review of the flood effects, to consider, and if required comment on, the MOH proposed conditions of consent, the MOH response to comments received, the minimum building height condition and the Emergency Plan for flood events.

#### **Proposed conditions.**

2. Proposed condition 33 requires the preparation of An Adverse Weather Response Plan.
3. It is required “prior to the Outpatient building commencing”. This wording is a little unclear – is it before construction commences or before commissioning of the building?
4. It is to “outline” (?) measures for managing “operations” (?) during flood events so that staff and visitors can access the building.
5. There are significant restrictions on access to the building under just modest flood events (10 year or greater flooding). There does not seem to be any description of what those practicable measures might be, when they might need to be implemented and indeed if there are any.
6. Evacuation of the building is to be included in the plan for “extreme” flood events. Clearly this would be required in the rare 500-year event but at what lesser flood would it be necessary? Presumably that would be when flooding in the streets prevented normal vehicle access, a condition much more likely to occur.
7. The Plan could require that certain specified actions are to be taken when flood water in the streets around the building reach stated milestone levels, e.g., a level when normal vehicles are stopped, a level when 4-wheel drive vehicles are stopped, a level when no street access is possible.

#### **MOH response**

8. The MOH acknowledges the risk of considering the whole New Dunedin Hospital development in stages but says the analysis by Jacobs addressed the impact of the hospital development on flood risk in the vicinity and concluded that it would not be changed by the development.
9. This is confirmed by the minor increase in substantial flood depths in the vicinity caused by the displacement volume of the hospital buildings compared to the volume of flood water that would accumulate in the area.
10. The MOH response to the adequacy of the flood level estimates over the long term of 100 years is to confirm that a floor level of 103.82 mOMD provides freeboard over the 500-year storm tide level even out to 2120. Some of the freeboard would be able to provide for a coincident terrestrial flood, an event that would be considerably rarer than the 500-year event.
11. These flood levels are estimates that contain significant uncertainties. The analysis has been conservative and appropriate.

#### **Minimum building height condition.**

12. This query seems to refer to a condition setting the minimum floor level for the building.
13. There is no specific condition setting this requirement. It is presumably found in the plans accompanying the application. It would be appropriate for there to be a condition that set the minimum floor level of the building at 103.82 mOMD.

#### **Emergency Plan**

14. Condition 33 requires there to be an Adverse Weather Response Plan. It is to address the functioning of the Outpatients Building during a flood event.
15. Earlier comments refer. It will have effect whenever flooding in the streets occurs. As already mentioned, a more prescriptive specification of what the plan must include would improve confidence that practicable and effective steps can be taken to ensure the functioning of the building.