‘TILLEGRA DAM - IS THE STORAGE SAFE?’

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Landslips inside the rim of the proposed storage

SCENARIO FOR FAILURE

- **A line of hills contains the “Tillegra Fault” and forms the east side of storage for nearly 3 km north from the proposed dam wall.**
- **Landslips inside the proposed storage area already weaken rock strata forming the reservoir rim.**
- **As the water level rises with filling of the reservoir the groundwater table will rise and water will soak through the fault, weakening the rock strata further.**
- **If the rim collapses the entire Williams River valley downstream would be inundated**

Breaching of the rim of a storage in this manner is quoted in Fell, MacGregor, Stapledon & Bell, *Geotechnical Engineering of Dams (A.A. Balkema Publishers, 2005).*

Fell et al state ” *It is clear the possibility of landsliding is an important feasibility issue for storage projects. However, from examination of 145 reservoir landslides case histories, ICOLD*[*] *(2002) has reported that:*

- *Only about 36% of the known reservoir landslides were recognized during the planning stage investigations;*
- *At least 75% of the known reservoir landslides were pre-existing dormant or occasionally active or active features, and*
- *Such pre-existing slides caused the most problems for reservoir owners.”*

CAN THIS BE PREVENTED?

Hunter Water Corporation has been unable to provide any evidence that this situation has been examined. It has stated that geological and geotechnical investigations will take 18 – 24 months.

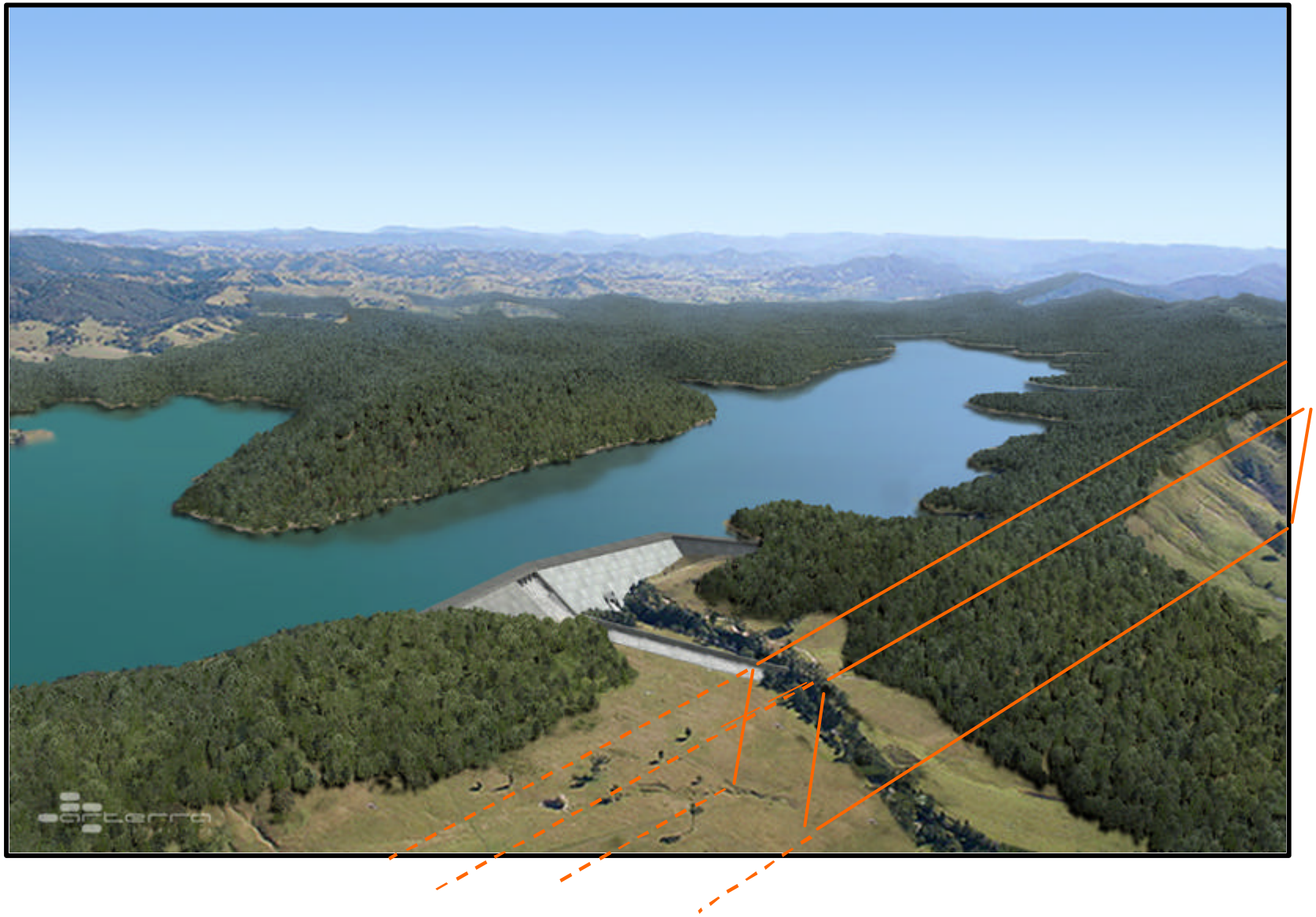
With no knowledge of the extent and potential seriousness of the situation it cannot be determined whether it is a preventable (repairable) situation or not.

If the eastern rim of the reservoir is not safe in its present condition it will add hugely to the cost of the project. Current preliminary cost estimates provided so far range between $150m - $400m over the budget estimate indicated in Premier Morris Iemma’s announcement in November 2006 .
This will not be known for at least 18 months according to Hunter Water Corporation.

[*] Reservoir landslides – guidelines for investigation and management. International Commission on Large Dams, Paris, Bulletin 120

“Tillegra Fault” Forms East Side Of Storage

(Graphic Of Proposed Dam & Trees Provided by HWC)



Landslips Inside Storage Area
Already Weaken Storage Rim

(Graphic Of Proposed Dam & Trees Provided by HWC)

Water Will Soak Through Fault

(Graphic Of Proposed Dam & Trees Provided by HWC)

Rim Collapses –
Floods Williams River Valley Downstream

Base photo supplied by NSW Dept of Lands