

Refer to

CH133 Insurance



water + environment

0768-02-568

21 April 2011

WRM Water & Environment Pty Ltd
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WATER DAMAGE ASSESSMENT

Property Details

WRM Ref.	0768-02-568
Address of Loss	[REDACTED] Brisbane
Insured Name	[REDACTED]
Land Use	Commercial
[REDACTED]	[REDACTED]
Adjuster	Cunningham Lindsay
Adjuster Name	Barry Porter
Adjuster Reference	8082743

Version of Events

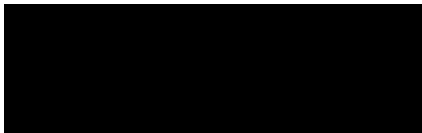
Representative Interviewed (by Phone)	Michael Harrison
Date and Time of Initial Inundation Above Floor Level	The initial inundation of the basement car-park at the property commenced at 0900 hours on the 12 th January 2011.
Version of Events (provided by Representative)	<ul style="list-style-type: none">• There are four levels of basement car-parking at the property that were inundated. The fourth (upper most) level was inundated to about one third of its height. The main sections of the hotel were not inundated above floor level.• The power board for the hotel is located on the first floor so power was available throughout the event.• At around 0900 hours on Wednesday 12th January, water started to flow into the basement car-park. The sump pumps were initially coping with the water.• At around 1430 hours, on Wednesday, the water started to come in as a deluge and completely overwhelmed the sump pumps.• The water appeared to be coming through the walls.• An external pump was required to drain the basement car-park.

Findings

Local Rainfall & Runoff	<ul style="list-style-type: none">• Total rainfall of 180mm was recorded for the period 9th-13th January at the Brisbane City Alert Station (540198) approximately 350m east of the subject property. Recorded hourly rainfalls and water levels at Brisbane City Alert are shown in Figure 1.• Peak 1-hour rainfall intensity of 28mm/hr occurred at 1600 hours on Sunday 9th January. Similar rainfall intensities are regularly experienced in Brisbane.• Peak stormwater runoff from the surrounding local catchment would have occurred within 10 to 30 minutes of peak rainfall.• There was no rain of significance recorded after 1500 hours on Tuesday 11th January and no rain was recorded after 0000 hours on Wednesday 12th January (See Figure 1)• Given that the property was not inundated until Wednesday when the
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	<p>rainfall had effectively ceased, local stormwater runoff would not have inundated the basement above floor level.</p>
Brisbane River Flooding	<ul style="list-style-type: none"> • The Brisbane River drains around the western, southern and eastern sides of Brisbane City. The Brisbane River overflowed and inundated the southern areas of Brisbane City including the southern end of [REDACTED] St on the 12th and 13th January 2011. Photos from Nearmap show that floodwaters inundated [REDACTED] Street and [REDACTED] Street in front of the subject property. • It appears that floodwater did not enter the basement via the access ramp from [REDACTED] Street. However, floodwater would have entered the neighbours adjoining basement car park to the south. • It is likely that the initial inundation of the basement was Brisbane River water backflowing through the stormwater pipes. The floor level of the basement car-park is well below river level. • Water would have also seeped through cracks and holes in the walls of the car-park from the surrounding ground. It is possible that some of these holes are connected to subsurface drainage through which Brisbane River floodwater surcharged. • The recorded water levels at the Brisbane City Alert gauge (540198) over the period of interest are shown in Figure 1. The Brisbane River peaked at a level of 4.46m AHD at 0400 hours on Thursday 13th January. • Overbank inundation would have commenced on Wednesday 12th January.
Conclusions	<ul style="list-style-type: none"> • The basement car-park at the subject property was inundated above floor level by floodwater from the Brisbane River backflowing through the piped stormwater drainage system. • Stormwater runoff would not have inundated the basement above floor level.

For and on behalf of
WRM Water & Environment Pty Ltd



Greg Roads
Principal Engineer

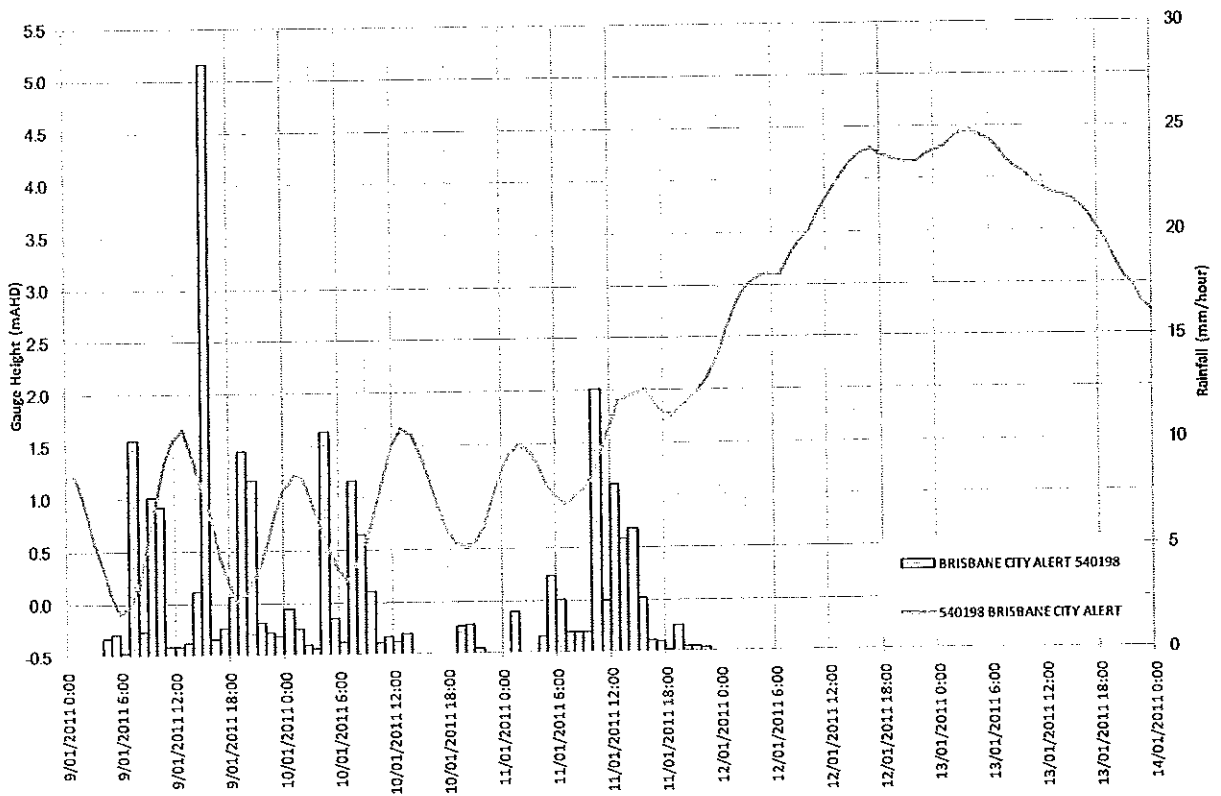


Figure 1 - Recorded Water Level and 1-Hour Rainfall Data for Brisbane City