

QUEENSLAND FLOODS COMMISSION OF INQUIRY

Oaths Act 1867

Statutory Declaration

QUEENSLAND

TO WIT

I, **Luke Anthony Lankowski**, of care of Council Chambers, corner of Egerton Street and Borilla Street, Emerald in the State of Queensland, Manager Development Services, Central Highlands Regional Council, do solemnly and sincerely declare that:-

The following is a true statement containing my response to the queries raised by the Commission in its letter dated 10 August 2011:

1. A summary of the assessment criteria contained in council's planning scheme(s) and how such criteria are used to assess applications for development in the natural hazard management area.

1.1 The Central Highlands Regional Council administers four (4) planning schemes, namely:

- a) *Bauhinia Shire Planning Scheme (2007)*;
- b) *Duarlinga Shire Planning Scheme (2007)*;
- c) *Emerald Shire Planning Scheme (Amendment No. 1 – 2009)*; and
- d) *Peak Downs Shire Planning Scheme (2005)*.

1.2 These planning schemes regulate development within their respective areas and include codes of development and overlay codes that assist in the assessment process by establishing specific outcomes and probable and acceptable solutions to achieve these outcomes.

1.3 Each of the planning schemes identified above include an overlay code that partially reflects the content of *State Planning Policy 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide*. However, none of these planning schemes specifically address flood impacts within their respective Natural Disaster Overlay Codes and as such, no natural hazard management area (flood) has been specifically identified within these planning schemes to reflect the extent of flood affected land at the present time.

1.4 A summary of the provisions contained within each planning scheme is included below:

1.5 *Bauhinia Shire Planning Scheme 2007*
The Natural Disaster Overlay Code of the *Bauhinia Shire Planning Scheme (2007)* addresses Bushfire and Landslide components only.

- 1.6 The *Bauhinia Shire Planning Scheme (2007)* does however specifically refer to flood impacts and floodplain issues within the Desired Environmental Outcomes sought for development within the local government area for the former Bauhinia Shire, permitting consideration of this issue during land use assessments.
- 1.7 However, no specific provisions or mapping are contained within the planning scheme with respect to flood impacts within the former Bauhinia Shire, including the townships of Springsure and Rolleston.
- 1.8 Duarlinga Shire Planning Scheme 2007
The Natural Disaster Overlay Code of the *Duarlinga Shire Planning Scheme (2007)* addresses Bushfire and Landslide components only and the planning scheme does not refer to flood impacts within the Desired Environmental Outcomes contained within this document. There are no other provisions in the planning scheme dealing with flood impacts.
- 1.9 Emerald Shire Planning Scheme (Amendment No. 1 – 2009)
The Natural Disaster Overlay Code of the *Emerald Shire Planning Scheme (Amendment No. 1 – 2009)* addresses Bushfire and Landslide components only. As such, the gazettal of this planning scheme was conditional on the continued operation and effect of this State Planning Policy as it relates to Flood.
- 1.10 The *Emerald Shire Planning Scheme (Amendment No. 1 – 2009)* does refer to floodplain impacts within the Desired Environmental Outcomes sought for development within the local government area for the former Emerald Shire, and seeks to ensure water quality is maintained and enhanced.
- 1.11 However, no specific provisions or mapping are contained within the planning scheme with respect to flood impacts within the former Emerald Shire, except for lands at the Gemfields in proximity to Policeman's Creek.
- 1.12 Development within the mapped Policeman's Creek area (Map 5a – *Emerald Shire Planning Scheme (Amendment No. 1 – 2009)*) (**Attachment 1**) is intended not to cause further erosion or to unduly impede the flow of water in the creek. The planning scheme also seeks to ensure that development in this area is safely located, constructed and maintained in respect to potential floods.
- 1.13 For other townships within the former Emerald Shire, no flood mapping is available within the planning scheme at the current time. However, Council has prepared mapping in relation to known flood events including 2008 and most recently the 2010/2011 flood event of the Nogoia River (**Attachment 2**). These maps are utilised on an advisory basis to inform the decisions of Council and inform developers and the public as to the known flood risk for their area.
- 1.14 Peak Downs Shire Planning Scheme (2005)
The Natural Disaster Overlay Code of the *Peak Downs Shire Planning Scheme (2005)* addresses Landslide only, but does refer to floodplain impacts within the Desired Environmental Outcomes sought for development

within the local government area for the former Peak Downs Shire, to ensure water quality is maintained and enhanced.

- 1.15 However, no specific provisions or mapping are contained within the planning scheme with respect to flood impacts within the former Peak Downs Shire.

2. A description of how the natural hazard management area, as it relates to flood affected land, is reflected in the planning scheme.

- 2.1 As noted above, each of the planning schemes identified above include an overlay code that partially reflects the content of *State Planning Policy 1/03 – Mitigating the Adverse Impacts of Flood, Bushfire and Landslide*. However, none of these planning schemes specifically address flood impacts within their respective Natural Disaster Overlay Codes.

- 2.2 As such, no natural hazard management area (flood) has been specifically identified within these planning schemes to reflect the extent of flood affected land at the present time.

- 2.3 To address this shortfall, Council is currently collating data to inform a proposed Temporary Local Planning Instrument to address flood impacts within the Central Highlands. The resolution to prepare this document was approved by Council on Monday, 6 June 2011. The resolution moved by Council is as follows:

2.4 "Temporary Local Planning Instrument

Resolution:

Cr Brimblecombe moved and Cr Haylock seconded 'That Council resolve to prepare a temporary local planning instrument to establish an interim residential flood level for known flood affected areas of Emerald in accordance with the Sustainable Planning Act 2009 and Statutory Guideline 02/09.

Carried"

- 2.5 This Temporary Local Planning Instrument is still being prepared, and will include data obtained from the 2008 and 2010/2011 flood events of the Nogoa River, once available. Once similar data is available for other communities within the Central Highlands, e.g. Rolleston, a similar Temporary Local Planning Instrument will be proposed for this area.

3. Details of Council's defined flood event including a description of:

- how the defined flood event was chosen;
- the way in which the council's defined flood event was calculated or determined.

- 3.1 No defined flood event has yet been chosen and reflected within the planning schemes identified above.

- 3.2 Since 2006, Council has utilised a map titled "Emerald Interim Flood Levels Map to Determine Floor Level" to establish a minimum floor level above the flood level (**Attachment 3**). The flood level captured within this

mapping is not defined in terms of average recurrence and was prepared by the former Emerald Shire Council with reference to historical flood information (e.g. river flows, etc), aerial photos, spot heights and contour information. This information was then cross-referenced with information approximating stormwater impacts based on known storm events.

- 3.3 Mapping sourced from the 2008 and 2010/11 flood events of the Nogoia River (**Attachment 4**), has also been utilised to inform the consideration of development applications in flood affected areas. These maps indicate the area inundated by water, but do not identify the depth of inundation, nor the velocity of flow at the current time, except for spot heights identified based on the peak flood data collected from these events. They are therefore considered to be used as a guide only, but are referred to by Council in its decision making processes.
 - 3.4 Mapping from 2010/2011 identifying contour information is also understood to be available soon, and this will likewise assist in Council's decision making processes and management of developments proposed within known flood prone areas.
 - 3.5 At this time, the average recurrence interval for both of these events is unknown. Once additional information is made available to Council through the completion of studies by C&R Consulting and KBR Consulting, this information will enable Council to allocate a return interval to these events to inform future planning studies, policy and the creation of a new planning scheme for the Central Highlands.
 - 3.6 Council has resolved to prepare a Temporary Local Planning Instrument to address flood impacts in the short term whilst the new planning scheme is being developed. This document intends to utilise information from both the 2008 and 2010/2011 flood events of the Nogoia River to identify the highest known level of inundation, with Council utilising this information to establish a worst case scenario that will form the baseline for flood mitigation strategies within this planning document.
- 4. A description of any planning requirements to have evacuation routes and/or early warning systems for areas identified to be at high risk of flooding, including information about how the existence of such evacuation routes and/or early warning systems are communicated to occupiers of areas at high risk of flooding.**
- 4.1 Within the four (4) current planning schemes for the Central Highlands, no specific requirements are included requiring evacuation routes and/or early warning systems to be included within developments known, or reasonably believed to be, at risk of flooding.
 - 4.2 However, all assessments are conducted on a site specific basis and as such, where appropriate, conditions are attached to developments to ensure access, or a means to evacuate during natural disaster events.

- 4.3 Examples of this approach can be seen in the decisions taken to approve the following subdivisions, to provide an emergency egress for persons during flood events:
- C3/93 – Riverview Street and Gray Street, Emerald (Subdivision 19 lots) – Approved: 30/06/1993; and
 - C4/93 - Riverview Street and Gray Street, Emerald (Subdivision 5 lots) – Approved: 16/10/1993.
- 4.4 These decisions provided for an easement to be provided to enable residents of land at Waldby Court with an alternate access location through Lots 7 and 8 on RP817168.
- 4.5 This approach to conditioning has also been utilised with respect to Bushfire impacts as part of the Development Permit for Stage 1 of the Echidna Valley Estate, a 25 lot reconfiguration of lot (File Reference: D537/04).
- 5. A description of any controls or standards used to assess the storage of chemicals or other Environmentally Relevant Applications for development below the Q100 flood line or the Council’s defined flood event.**
- 5.1 All applications for the storage of flammable and combustible liquids are assessed in accordance with the provisions of the *Dangerous Goods Safety Management Act 2001* and *Australian Standard 1940*. Although there are no specific criteria within the legislation in respect of storage below Q100 flood line, the provisions are stringent in relation to the appropriate storage and containment of chemicals.
- 5.2 When assessing applications for Environmentally Relevant Activities, Council adheres to the provisions of the *Environmental Protection Act 1994*, *Environmental Protection Regulation 2008*, Codes of Compliance and guidelines when imposing conditions. Again there are no specific criteria for conditioning ERAs below the Q100 flood line.
- 5.3 Until the 2010/2011 flood event Council had no specific data on flood levels to be able to impose additional conditions on ERAs and chemical storage facilities that may be below the Q100 flood line. It would appear that the current legislation for the storage of chemicals and approval of ERAs does not have any provision to impose additional conditions where they are located below the Q100 flood line and as such it is questionable as to what head of power Council would have to impose such flood mitigation measures.
- 6. A description of any conditions imposed by Council on the approval of development application to ensure that hazardous materials affected by flood water do not affect public safety and/or the environment.**
- 6.1 Development approval conditions imposed on storage facilities for hazardous materials do not relate specifically to affects by flood water but the general conditions do impose a duty of care on the operator not to cause environmental harm or environmental nuisance. Standard

conditions require that the facility is protected from the impacts of surface water runoff and any contact is contained on the site.

- 6.2 Development approval conditions are formulated to meet the requirements of the *Environmental Protection Act 1994* and Regulations, the *Dangerous Goods Safety Management Act 2001* and Regulations, *Australian Standard 1940* and any other relevant code of compliance guidelines. The Development Approval conditions are quite detailed and have therefore not been detailed herewith, but examples can be provided on request.

7. A description of how levee banks are regulated in the Council area using specific examples.

- 7.1 The Central Highlands Regional Council administers two (2) Local Laws with respect to the construction of levee banks within the former local government areas of Emerald Shire and Peak Downs Shire, namely:
- a) *Emerald Shire Council Local Law (Levee Banks) No. 45 of 1997;*
and
 - b) *Peak Downs Shire Council Local Law No. 2 (Levee Banks).*
- 7.2 There are no Local Laws in relation to the construction of levee banks within the former local government areas of Bauhinia Shire and Duaringa Shire.
- 7.3 As noted in Council's previous response to the Queensland Floods Commission of Inquiry, dated 11 August 2011, since 1997, applications for levee banks were assessed by the Nogoa River Flood Plain Board, although Council is aware of two (2) levee banks that were established since this time that received approval from the Queensland State Government and benefited Ensham Resources Pty Ltd.
- 7.4 The Nogoa River Flood Plain Board was established to manage and control the development and use of works on the Nogoa River Flood Plain. The Board administers Local Law (Levee Banks) No. 1 - 1997 (as amended 14/01/2000).
- 7.5 When an application is received, the Board seeks independent expert assessment of the application from SunWater who then prepare a Hydraulic Impacts Assessment Report by running the data through the model developed for the Board and updated in 2007 to include all existing structures on the flood plain.
- 7.6 Based on the recommendation contained in the report the Board either approves or refuses the application. In the event of an approval being granted, the levee bank is issued a permit and licensed for a period of ten (10) years.
- 7.7 Since the Board's inception in 1997, thirteen (13) Levee Bank applications have been approved, excluding applications approved by the Queensland State Government.

8. Details of Council infrastructure (sewers, roads, stormwater etc) that was affected by flooding during the period 1 December 2010 to 31 January 2011.

8.1 This section is broken down into details on:

- Urban infrastructure,
- Rural infrastructure, and
- Sport and Recreation Facilities.

8.2 This response has been prepared with reference to the statement of Mr William Jeremy Turner, General Manager Civil Operations, Central Highlands Regional Council, who has provided a separate response to the Flood Commission of Inquiry that addresses this question.

8.3 Urban Infrastructure

A significant amount of Council infrastructure was affected by the flooding either by inundation or the effects of flowing water. Affected infrastructure included roads, water supply, wastewater, parks and gardens, sports fields, stormwater, bridges, some buildings and public amenities. The urban areas most affected were Emerald and Rolleston although there were roads affected in other townships within the Central Highlands Regional Council area.

8.4 Emerald

8.4.1 **Flood Spread:** The extent of flood spread within Emerald is shown in Attachment 4. This flood spread information was compiled by the Manager Corporate Governance, Central Highlands Regional Council, and was based on site observations, post event water marks, debris deposition and input from private individuals.

It should be noted that this plan shows the extent of water inundation only and gives no indication of water depth, water velocity, direction of flow or duration of inundation. All council infrastructure in the flood spread area was affected to varying degrees.

8.4.2 **Sewerage Infrastructure:** There are 30 sewer pump stations in Emerald and 19 of these were inundated by flood water. Of these 7 suffered electrical damage as a result of control panels and/or switchboards being submerged and required repairs before they could be returned to service. The 12 pump stations that were submerged without electrical damage were able to return to service once flood waters had subsided below the level of the pump station lid. **Attachment 5** shows the location of the affected pump stations.

The wastewater treatment plants in Emerald, located in Park Avenue and Black Gully (north east of the Airport) were not affected by flooding.

- 8.4.3 **Water Infrastructure:** The Opal Street Water Treatment Plant was not greatly affected by flooding although temporary levees were installed to keep flood water out. The water reticulation network is effectively a “closed” system and was not affected.
- 8.4.4 **Roads:** Many roads in Emerald were affected by flooding as is evident from the Flood Spread map. The depth of flooding varied as did the duration. Those roads that were subjected to longer periods of submersion have generally deteriorated with time as vehicle loads on the saturated pavements have caused cracking, rutting and deformation. In addition to the road pavement, other infrastructure such as footpaths, kerbing, street signs and street trees were also affected by the flooding.
- 8.4.5 **Bridges:** The John Gay Bridge over the Nogoia River is a low level structure and was closed for a significant period of time. Although the structure itself did not suffer any damage the approaches to the bridge were saturated and required repairs.
- 8.4.6 **Parks & Gardens:** Many park and garden areas were flooded but generally sustained no long term damage. Four pumps used to extract irrigation water from the Nogoia River near the Botanic Gardens were all affected by flood debris but were cleared of debris and silt and returned to service once water subsided.
- 8.4.7 **Cemeteries:** The Emerald cemetery in Park Avenue was not affected by flooding.

8.5 Rolleston

- 8.5.1 **Flood Spread:** Attachment 6 shows the extent of the Flood Line with the water level being well above the highest level previously recorded.
- 8.5.2 **Sewerage Infrastructure:** Two pump stations located near the Comet River were flooded and suffered electrical damage.
- 8.5.3 **Water Infrastructure:** The Rolleston Water Treatment Plant, located alongside the Comet River, was inundated with about 500mm of water on the floor. Water from an emergency bore field was used to maintain the water supply to the township. As part of water supply security an in line chlorinator had been installed at the bore in anticipation of the need to use the bore field.
- 8.5.4 **Roads:** A few roads within the town were affected by flood waters but inundation was not long term and traffic loadings were generally light with little if any permanent damage being caused.

8.6 Other Towns

All towns in the council area were affected to some extent by flooding of varying degrees. In some case this was surface water only which dissipated quickly after rain eased off or stopped. The towns of Sapphire, Rubyvale and Bluff experienced flood waters that covered low lying areas including sports fields but these recovered as the water receded.

Many towns were isolated for several days by flood waters as rivers and streams rose to high levels resulting in road closures of both council and state roads. Examples were the Capella Rubyvale Road (council road) and the Gregory Highway (state road) from Emerald to Capella and Emerald to Springsure.

8.7 Rural Infrastructure

Numerous roads throughout the council area were affected by flooding. In some cases the effect was inundation with the roads being relatively undamaged and able to carry traffic as soon as water receded.

In cases where the water remained for some time the road pavements became very saturated and suffered damage once reopened. This damage became noticeable over a period of time as vehicle usage, particularly by heavy vehicles, was unable to be sustained by the road pavements because the saturation resulted in a significant loss of strength.

On many unsealed roads pavement saturation was extreme due to the absence of a water proofing seal coat and usage was either restricted to light vehicles only or the road was closed until conditions improved. A number of roads were so saturated that heavy vehicle usage was not possible for many months. This caused problems in several areas because the cartage of cattle to sale yards, feed lots or slaughter was not possible for up to nine months.

Some roads were so badly damaged by large volumes of flood waters that had sufficient velocity to scour out roads completely that complete rebuild of some sections of road were necessary.

8.8 Sport and Recreation Facilities

A total of twenty eight sport and recreation clubs within the council area were affected by flooding. Although most club buildings, facilities and equipment is owned by the clubs themselves the grounds on which they operate are owned by the Central Highlands Regional Council. More details on the extent of damage are contained in the “**Sporting Clubs Flood Damage Report**” prepared by Debbie Hall (Department of Communities) and Mike Priddle (Central Highlands Regional Council) which is included with this statement as **Attachment 7**.

9. A description of the measures used by Council to protect Council infrastructure (sewers, roads, stormwater etc) and to ensure such infrastructure functions during defined flood event.

- 9.1 In preparing for the 2010/2011 flood event of the Nogoia River, Council engaged a surveyor to establish the levels of key infrastructure associated with the Opal Street Water Treatment Plant, Sewer Pump Stations and Switchboards prior to the event. These levels informed staff as to what infrastructure would be affected at various predicted flood levels.
- 9.2 Temporary levees were established to protect infrastructure within the Water Treatment Plant, to ensure the ability of Council to maintain the production of potable water for Emerald.
- 9.3 Power was also disconnected from facilities and infrastructure, such as sewer pump stations, within known flood prone areas.
- 9.4 Other actions taken to minimise damage sustained by Council infrastructure included the closure of roads to all traffic, to protect the integrity of saturated road pavements, and the removal of bins, etc. from Council parks located within known flood affected areas to reduce the potential for loss or damage of these assets, and eliminate the potential for these assets causing damage further downstream.
- 9.5 Council also undertook routine inspections of infrastructure prior to this flood event to ensure that infrastructure was performing appropriately, for example flood gates on stormwater infrastructure.

And I make this solemn declaration conscientiously believing the same to be true, and by virtue of the provisions of the *Oaths Act 1867*.

[Redacted]
Declarer

Taken and declared at **Emerald** this **1st** day of **September 2011**, before me

Deborah Robyn Smith

[Redacted]
Justice of the Peace

