

## **BEFORE THE HORIZONS REGIONAL COUNCIL**

**IN THE MATTER** of the Resource Management Act 1991

**AND**

**IN THE MATTER** of the Proposed One Plan, notified by the Horizons Regional Council, hearing related to Natural Hazards submissions by Landlink Ltd

### **STATEMENT EVIDENCE OF WILLIAM JOHN LANGDON PHILPOTT**

**On Behalf of Landlink Ltd**

#### **1 INTRODUCTION**

- 1.1 My full name is William John Langdon Philpott, and I am a Consulting Engineer with John Philpott & Associates Ltd.
- 1.2 I hold a Master's Degree in Civil Engineering and have 30 years postgraduate experience in engineering design, project management and construction supervision, specialising in the field of river and drainage engineering. Prior to establishing John Philpott & Associates Ltd in 2000, I held the positions of Resource Information Manager and prior to that Operations Manager with Manawatu-Wanganui Regional Council. My work over the 15 years with Horizons Regional Council and its former authorities included river and drainage operational engineering, investigation and design engineering work.
- 1.3 During those fifteen years with Horizons Regional Council I held the role of flood manager and through that role gained a comprehensive understanding of the flood risks and flood hazards in the Manawatu Region.
- 1.4 In the last two years I have managed the development of a new rating system for the Lower Manawatu Scheme which involved the preparation and analysis of flood maps for the entire Lower Manawatu floodplain. In developing this rating system, particular attention was given to the Taonui Basin floodable area and the overland flow paths leading from the spillways.
- 1.5 I am providing evidence for Landlink Ltd, a private land development consulting business based in Waikanae. Landlink has a responsibility to its' clients to contribute to the evolution of public documents, and to act as a good corporate citizen. To achieve this, Landlink regularly makes submissions and contributes to discussion on regional and local matters of concern to it, its clients and the general public.
- 1.6 I have read the Code of Conduct for Expert Witnesses in the Environment Court Practice Note (31 July 2006). I agree to comply with the Code of Conduct, and am satisfied that my evidence in this statement is within my

area of expertise. I have not omitted to consider material facts known to me that might alter, or detract from, the opinions that I express.

## 2 SCOPE OF EVIDENCE

- 2.1 This report discusses the Section 42A report prepared by Peter Blackwood, Manager Investigations and Design on behalf of Horizons Regional Council and the planning report and amended Chapter 10 of the proposed One Plan prepared by Consultant Planner, Phillip Percy.

## 3 THE PROPOSED ONE PLAN, CHAPTER 10

- 3.1 The amended chapter 10, Policy 10-2 states that:

*(a) the Regional Council and Territorial Authorities shall prevent the establishment of any new structure or activity, or an increase in the scale of any existing structure or activity, within a floodway\* mapped in Schedule I unless*

- (i) It is necessary to locate the structure or activity within such an area owing to functional constraints— in which case the structure or activity may be allowed.*

and then goes on to state that:

*(b) the Regional Council and Territorial Authorities shall prevent the establishment of any new structure or activity, or an increase in the scale of any existing structure or activity, within any other area likely to be inundated by a 0.5% annual exceedence probability flood event **unless** either—*

- (i) It is necessary to locate the structure or activity within such an area owing to functional constraints; or*  
*(ii) the residual inundation\* of land within a privately owned property\* or on a road will be no deeper than 0.5m above finished ground level with a maximum water velocity of 1m/s, or some other combination of water depth and velocity that can be shown to result in no greater risk to human life, infrastructure or property— in which case the structure or activity may be allowed.*

*(c) in circumstances where a structure or activity is allowed in accordance with clause (a) or clause (b), the following effects shall be avoided or mitigated:*

- (i) any increase in risk to human life, infrastructure or property, except where these effects are adequately avoided or mitigated by managing the residual inundation\* in accordance with clause (b)(ii); and*  
*(ii) any increase in flood risk; and*  
*(iii) any reduction in the effectiveness of existing works or structures, including works and structures within River and Drainage Schemes, or natural landforms for avoiding or mitigating the effects of flood hazard events.*

The proposed amendments to Policy 10-2 of Chapter 10 (above) raises a number of issues which need to be addressed.

- 3.2 The consultant planner and Mr Blackwood seek to define the Taonui Basin area as a 'floodway'. In his report Mr Blackwood has defined a 'floodway' as an area of land where water enters in major floods and may include overflow paths and ponding areas. Whilst the definition in his report is clear, the term floodway has been used in the Manawatu for many years to describe what Mr Blackwood now defines as an overflow path.

This change may lead to significant confusion in the future and its use should be carefully considered. Overflow paths are defined as areas leading fast-flowing water across the flood plain. Whilst there are areas within the Taonui Basin that can be considered to be a overflow paths, in my opinion the majority of the Basin falls into the ponding category and possibly a further category where the floodwaters are moving but are shallow and relatively slow-flowing.

- 3.3 The area currently defined as the Taonui Basin floodway under the Schedule I:3 Map, differs considerably from the other floodway areas identified under the Schedule I Figures 1.2, 1.4 & 1.5, in that the flood waters spill over a number of spillways, in some cases via short sections of what has been defined as an overflow path, and in other cases into areas that can only be described as floodable areas. In contrast, the 'Moutoa Floodway' and the 'Makirikiri Floodway', and to some extent, the 'Reid Line Floodway', are all areas where deep floodwaters flow relatively quickly between stopbanks, leading floodwaters from a spillway to either a ponding area, back into a river, or into another river further downstream.

- 3.4 It is a well-known fact that the Taonui Basin has always flooded, and considerable development has been undertaken within parts of the Taonui Basin. This includes development on the western edge of Palmerston North City. There are areas on the fringes of the currently defined Taonui Basin Floodway that only become inundated when ponding floodwaters rise within these areas. Given the existing status quo, it is considered that as long as any new development on the fringes of the floodable area is protected to a high standard, and there is low residual risk, development should not be prevented. It is acknowledged that a key requirement for allowing development within the fringe floodable areas is that any development and protection provided to the developed area must not have any significant adverse impact on any other property within the floodable area.

- 3.5 Given the above, in my opinion, Section (a) of the amended One Plan Policy 10-2, is appropriate for the Moutoa, Makirikiri and Reid Line Floodways. I also consider that it is appropriate for those areas within the currently defined Taonui Basin Floodway where floodwaters are confined within a stopbanked flow path or any future confined flow path (refer to attached map)

- 3.6 In my opinion the majority of the floodable area in the Taonui Basin, or those areas not recognised as being confined within a stopbanked flow path on the attached map, should be covered by Section (b) of amended Policy 10-2, which permits development if certain criteria can be met.

3.7 I have considered Mr Blackwood's report and believe that Mr Blackwood covers the matters of development in floodable areas extremely well. However, in my opinion, I do not believe that Mr Percy has fully understood the guidance and technical points discussed in Mr Blackwood's report. This is because Section (b) as drafted in the amended Policy 10-2 allows development in areas that will be inundated in a 0.5% AEP (200-yr flood) if the residual risk is low. i.e no deeper than 0.5m and with a maximum velocity of 1m/s; and I do not believe that this is what the Council intended, nor is this what is recommended in Mr Blackwood's report.

3.8 Mr Blackwood's report states that land could be rezoned or developed for urban use if it is protected to the 0.5% AEP flood standard and the residual risk in a 0.2% (500-yr flood) is low, i.e. No deeper than 0.5m and with a maximum velocity of 1m/s or a ponding depth of 0.8m with zero velocity.

#### **4 SUMMARY**

4.1 In conclusion, I do not support the proposed amendment to the map provided under Schedule 1:3 (i.e. that which is proposed to be referenced as the Taonui Basin Floodway). Based on my evidence provided above, I seek that Schedule 1:3 maintain its existing reference as the 'Taonui Basin Floodable Area' and to improve clarity, the small sub areas that fit within the definition of Overflow Path be named accordingly.

4.2 I also recommend that Policy 10-2 (b) be amended to include the recommendations in Mr Blackwoods report, summarised in paragraph 14 above.