Mapping the Environmental Footprint of the Central Plains Water Irrigation Scheme

A thesis submitted in partial fulfilment of the Masters of Design

Mapping the Environmental Footprint of the Central Plains Water Irrigation Scheme

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Dean Ivamy

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Surname: IVAMY

First Name: DEAN

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A final decision on the proposed Central Plains Water (CPW) scheme needs to be left to the consent-granting authorities, according to Christchurch City Mayor Bob Parker. The basis for this position is that the issues raised by the proposed irrigation scheme are simply too complex for members of the public to grasp. (The Press, September 10, 2007).

Abstract

In the statement Mayor Parker is referring to a complexity of issues that involves a plethora of hard-scientific and statistical information. The diversity of opinions regarding the scheme's benefits and potential negative implications also create misunderstanding for the general public. This prompts the hypothesis of this design thesis, which suggests that statistical data when visually mapped and in the context of its physical environment can provide significant cognitive and ecological awareness for the viewer to understand the economic and environmental implications of the proposed irrigation scheme.

Both the areas of cartographic mapping and the dairy industry contain controlled vocabularies, which present opportunity for graphic modeling and explanation through visible phenomena. The Canterbury Plains has a well-established historical and agricultural narrative. However, due to the recent dramatic and substantial transition of the region's dairy industry between the periods 1995 – 2008, subsequent demand for freshwater now represents the real prospect of uncharted future environmental instability.

The development of a visual language system capable of the interpretation and construction of the irrigation scheme's benefits and potential negative implications, provide this thesis through graphic modeling the possibility to compare the proposed CPW scheme's issues. While some industry groups consider public participation as arbitrary and unnecessary, recent surveys indicate water quality and fertiliser management as the most significant areas for environmental concern. The debate should not exclude the public, but rather include communication systems capable of reaching all communities.

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