

# WETLAND WARRIORS

Wetlands in Canterbury Presentation  
Research Methods

How can the story\* of distinctive Canterbury Wetlands be effectively visualized for attendees at the International Wetland Conference? (\*including cultural and physical narratives)

Kaley Boyd  
Jess Holland  
Annaliese Boot  
James Hoare

Geography 309- Research  
Methods



## Executive Summary

In October next year, Christchurch is hosting the 11<sup>th</sup> International Wetland Conference (IWC). Di Lucas, a member of the 2020 IWC organising committee, wants to provide attendees an opportunity to learn about Canterbury wetlands. Di's goal is to have presentation options available at the conference to show attendees the changes of Canterbury wetlands through time. As conference attendees will come from all around the globe, this will be an opportunity to showcase wetland values that are significant to New Zealanders.

How can the story\* of distinctive Canterbury Wetlands be effectively visualised for attendees at the IWC? (\*including cultural and physical narrative). Cultural narrative refers to the Māori and European settlers. The physical narrative refers to the geomorphology, geology and ecology of the wetlands. The aim is to present the story of Canterbury Wetlands at the IWC.

To be considered a significant Canterbury wetland they had to have: a relationship with other wetlands, be geomorphologically different, have ecological information available and be of cultural significance. Presentation methods had to be inclusive, no narrator requirement, engaging and factual. A review of academic literature was completed to determine effective presentation methods and to find wetlands that meet the selected criteria.

Distinctive selected wetlands were the Waimakariri Lakes Complex, Waimakariri River, the Avon River within the CBD precinct and the Avon- Heathcote Estuary (Ihutai). The presentation methods selected include a Prezi display for at the conference and a walking tour to be completed in attendees own time. A website was created to link the presentation methods together and provide additional information for those who are interested.

The largest limitation in this project was finding in depth information on all Canterbury wetlands. Those with lin

## 1.0 Introduction

Wetlands are identified by Ramsar as being "







#### 5.1.4 Avon- Heathcote Estuary/ Ihutai

Ihutai was chosen as a study site due to its cultural and physical importance to Christchurch. The estuarine wetland supports both native and exotic flora and fauna. It is commonly used for recreational activities and is easily accessible to attendees of the IWC.

Ihutai is an estuary, fed by the South-East flowing Avon River and the North-East flowing Heathcote River (Crossland, 2013). Ihutai supports multiple significant species, such as the bar-tailed godwit, which has a declin



### 5.2.3 Walking Tour and QR Codes

The walking tour was planned to provide attendees of the IWC the opportunity to explore Christchurch wetlands and quickly became a guide for wetland exploration within Central Christchurch City. The walking tour has two different routes for variety in the environments explored to the North or South. The split into two routes makes it accessible to all fitness levels. The resulting walking tour could become accessible to both members of the conference and the general public.

The walking tour sites were selected based on cultural importance to both Māori and early Europeans, including relevant sites of today. There were eight sites selected that are significant to Christchurch CBD culturally and/or ecologically. The walking tour was supported by a brochure (Appendix E). It would have a map showing the location of Christchurch wetland areas with a short blurb on each of the selected environments.

The brochure map was created using a wetland location shapefile. OpenStreetMap was used as the background layer to ensure readers would be able to navigate with the map effortlessly. Upon scaling the map down to fit the brochure, the background layer quality was decreased so the street names could not be read. This was combated by tracing around the streets to create a simplified

## 5.3 Limitations

### 5.3.1 Research Limitations

The variability of secondary resources constrained the research. For example, the Rakaia Lakes was investigated as a possible high-country site with wetlands around the Rakaia River as the upper plain wetlands. While detailed information on high-country wetlands was found, there was very little research about wetlands along the associated plains of the Rakaia River. Therefore, the Rakaia River was discarded as a possible option.

Background research of the geological, ecological and cultural aspects of each of the wetlands were gathered using reports concerning the Christchurch City Council or ECAN. This limited the research as most of the reports were completed for industrial development and policy, not for general research of wetlands.

A similar problem occurred with the documentation of cultural importance during early human settlement. Māori history, before European arrival, was passed on through oral stories. Much of the data relating to early human settlement is a combination of archaeology and Māori genealogical history with records becoming more detailed throughout time. This information would have given more detail about Canterbury's Wetlands if it had been available.

### 5.3.2 Presentation Limitations

Limitations to the webpage include data and image collation. There was a wide range of secondary data on the wetlands; however, collating the information was challenging. The issue of copyright limited the possible images that could be used to those that were taken by group members or a select few images online which were available for commercial use.

The Prezi limitations are the ability to play automatically and consist of clear information. The Prezi software itself does not allow the presentation to be saved as a movie file. Therefore, the screen recording software Action! was used to record the presentation with a 10-second delay on each slide for the conference. Each slide focuses on a different wetland to emphasise the significance of those chosen. The layout was made to ensure that viewers could understand the information even if they do not watch from the beginning.

## 5.

## 6.0 Conclusion

Presenting the story of certain Canterbury wetlands has had its limitations and benefits. Research and presenting methods were finalised by literature reviews. Wetland sites required valid research on geological, ecological and cultural history. Presentation methods interconnected with all the designed methods relating back to the website for effective user interaction. Limitations were based around lack of literature and time. Future suggestions include introducing it as an educational tool to raise public awareness on wetland significance.

## 7.0 Acknowledgements

Thank you to the following individuals:

- Di Lucas, for providing the project.
- Hamish McNair, for giving guidance at the start.
- Simon Kingham, who dealt with the occasional meltdown.
- Ben Holland, for his help in designing the brochure

## References

<https://www.ccc.govt.nz/assets/Documents/Environment/Water/Avon-River-Catchment-Vision-Values.pdf>

Conklin, J. R., Verkuil, Y. I., Smith, B. R. (2014). PRIORITIZING MIGRATORY SHOREBIRDS FOR CONSERVATION ACTION ON THE EAST ASIANAUSTRALASIAN FLYWAY. *WWF-Hong Kong*. Retrieved from: [http://awsassets.wwfhk.panda.org/downloads/wwf\\_prioritization\\_finalpdf.pdf](http://awsassets.wwfhk.panda.org/downloads/wwf_prioritization_finalpdf.pdf)

Cooper, S. S. (1980). *Methods of teaching*





## Appendices

Criteria for choosing significant wetlands and presentation techniques.

*Table 1 Presentation method literature results collated to determine their effectiveness at presenting the Story of Canterbury wetlands (Hays, 2002; Grech, 2018; Krum, 2014; Hamilton-Ekeke, 2007; la'afar-Furo, Sulaiman & Dana'ilu,*

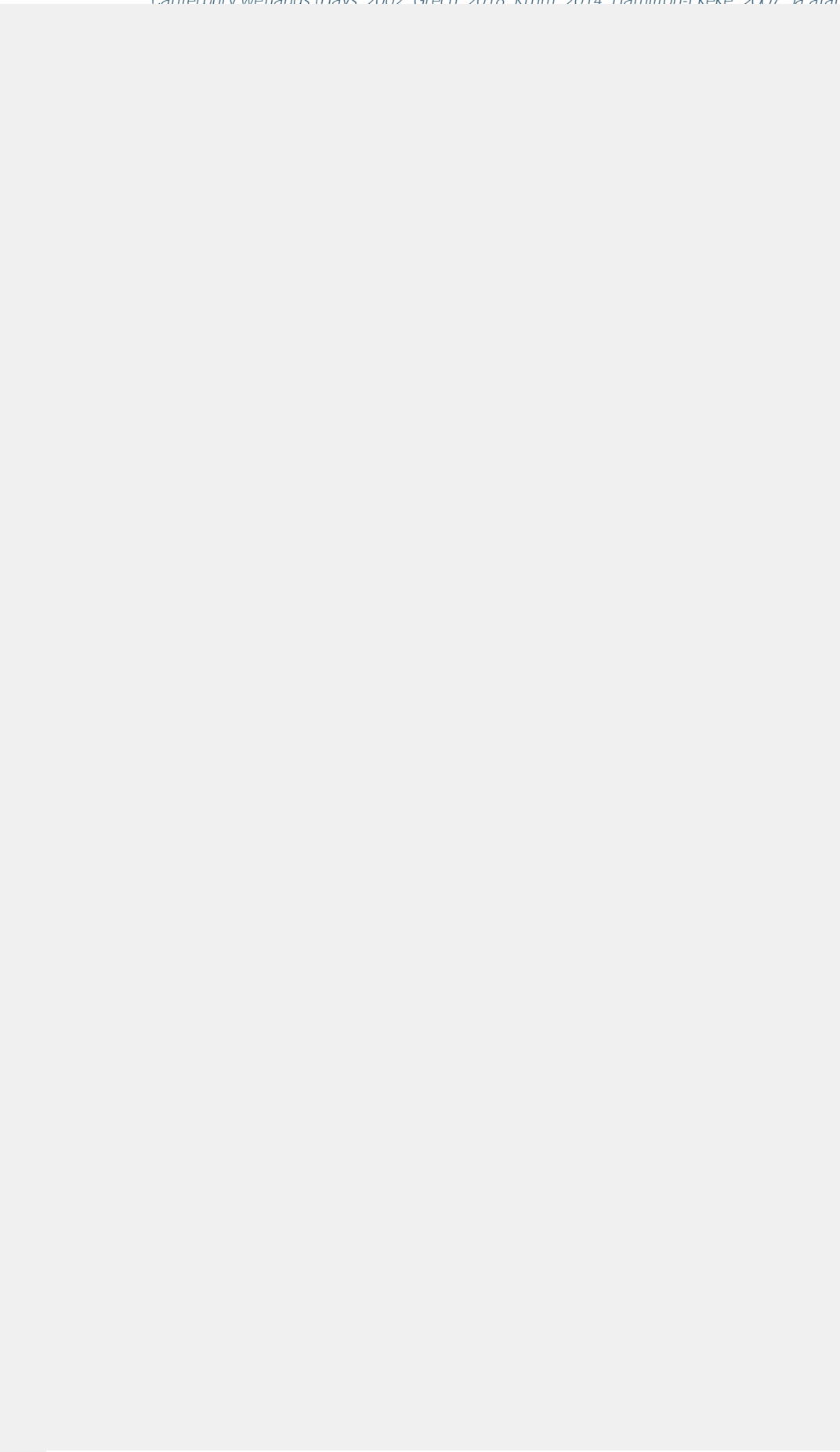




Table 2 How the selected wetlands fit the criteria for being a significant Canterbury wetland.

	Head of Waimakariri River.	Fed by the Waimakariri Lakes Complex.	Fed underground by the Waimakariri River.	Fed by the Avon River.
	Glacial processes shaped the landforms present in the Complex.	Braided rivers are rare globally. Canterbury is home to 60% of New Zealand's braided rivers. It has a long history of transporting glacial- fluvial sediments along the Canterbury Plains and building up the terrane.	A key part of Christchurch's cityscape.	Largest shallow, semi-enclosed, tidal wetland in Canterbury.

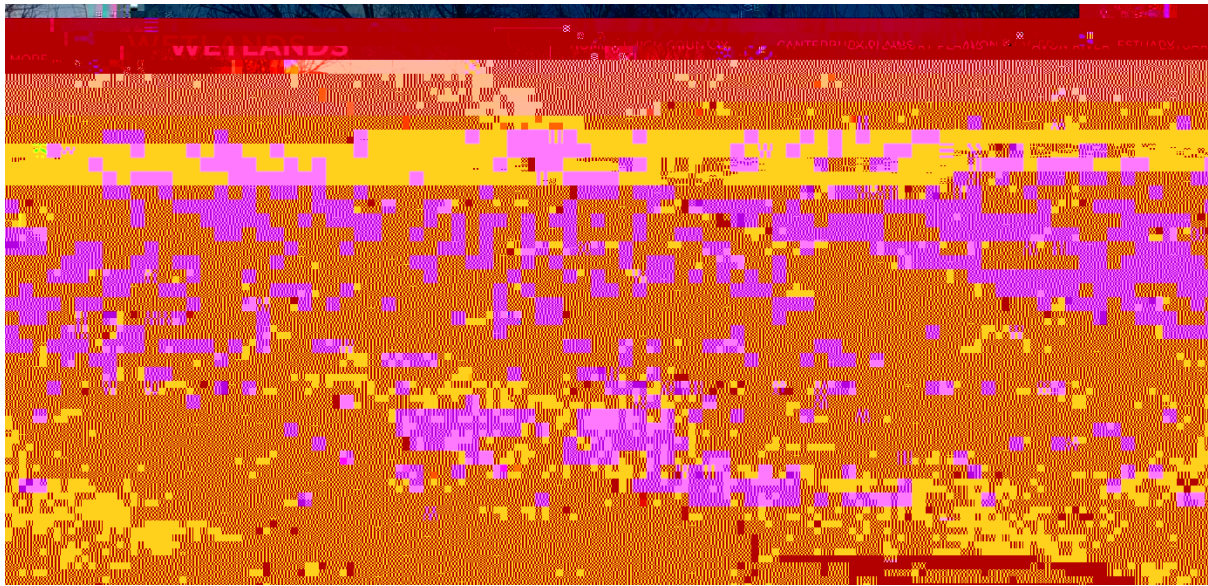
The most notable waterfowl in the Complex the endangered Great Crested Grebe as such the complex is one of 4 key regions in New Zealand for this bird. The ecological value of the lakes is recognised in the Wildlife Refuge Status for Lake Grasmere and recommendation of placing Lakes Sarah, Pearson and Letitia into protection.

0 0 2y 107.06 r.6c

waders and  
shor



The link to the website designed is as follows: <http://wetlandsofcanterbury.weebly.com>



Outside of brochure:

