

91010R



NEW ZEALAND QUALIFICATIONS AUTHORITY  
MANA TOHU MĀTAURANGA O AOTEAROA

QUALIFY FOR THE FUTURE WORLD  
KIA NOHO TAKATŪ KI TŌ ĀMUA AO!

## Level 1 Geography, 2016

**91010 Apply concepts and basic geographic skills to demonstrate understanding of a given environment**

9.30 a.m. Wednesday 16 November 2016  
Credits: Four

**RESOURCE BOOKLET**

Refer to this booklet to answer the questions for Geography 91010.

Check that this booklet has pages 2–10 in the correct order and that none of these pages is blank.

**YOU MAY KEEP THIS BOOKLET AT THE END OF THE EXAMINATION.**

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**Resource A: Introduction – The Clutha River / Mata-Au**

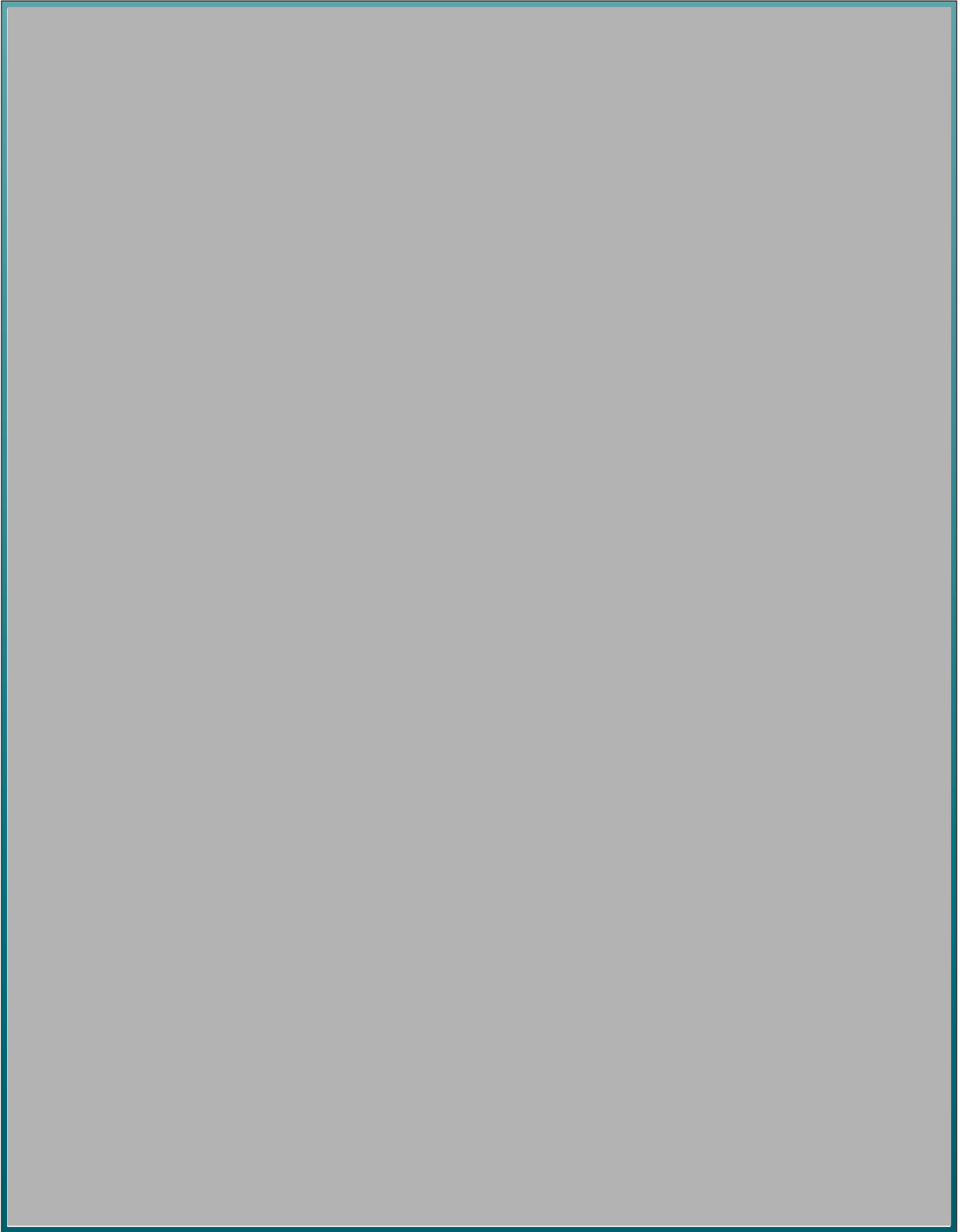
The Clutha River / Mata-Au is 338 km in length.



The Clutha River system

A section of the Clutha River bank is now the site of both the Roxburgh Gorge Cycle Trail and the Clutha Gold Cycle Trail, both of which opened in 2013.

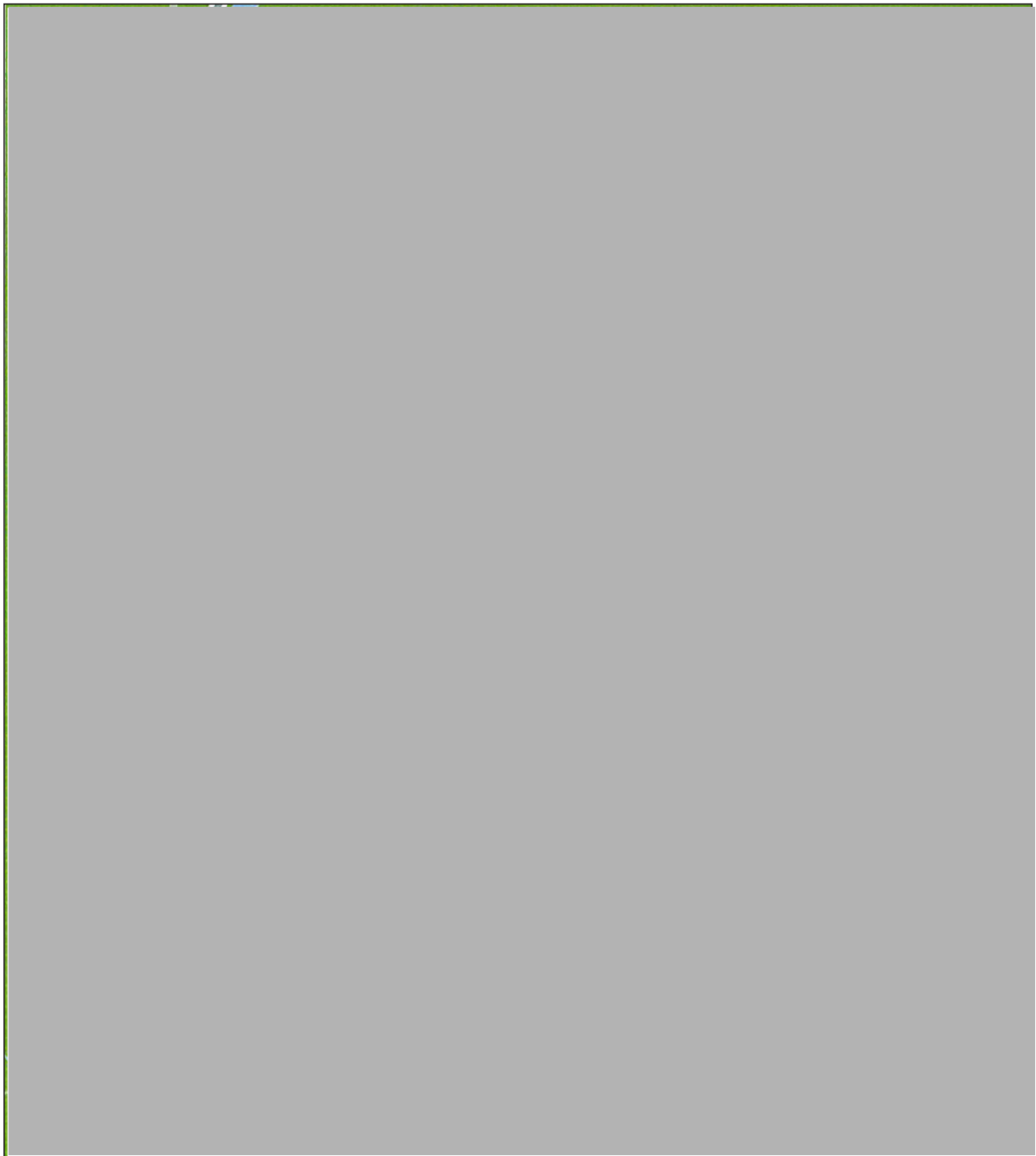
**Resource B: New Zealand Cycle Trail 'Great Rides'**



**Resource C: Clutha Gold Trail (of the New Zealand Cycle Trail network)**

Officially opened in October 2013, the Clutha Gold Trail allows cyclists a comfortable two-day trip. The trail showcases the area's history of early Māori moa-hunters, Chinese goldminers, European pastoral farming, mining, and railways.

The trail follows the mighty Clutha River / Mata-Au; it weaves through trees and traverses the beautiful Beaumont Gorge. It then branches off into farming valleys and some sections of the former route of the historic Roxburgh Branch railway line, including the 440m-long Big Hill Tunnel.



### Resource D: Topographic map of Roxburgh

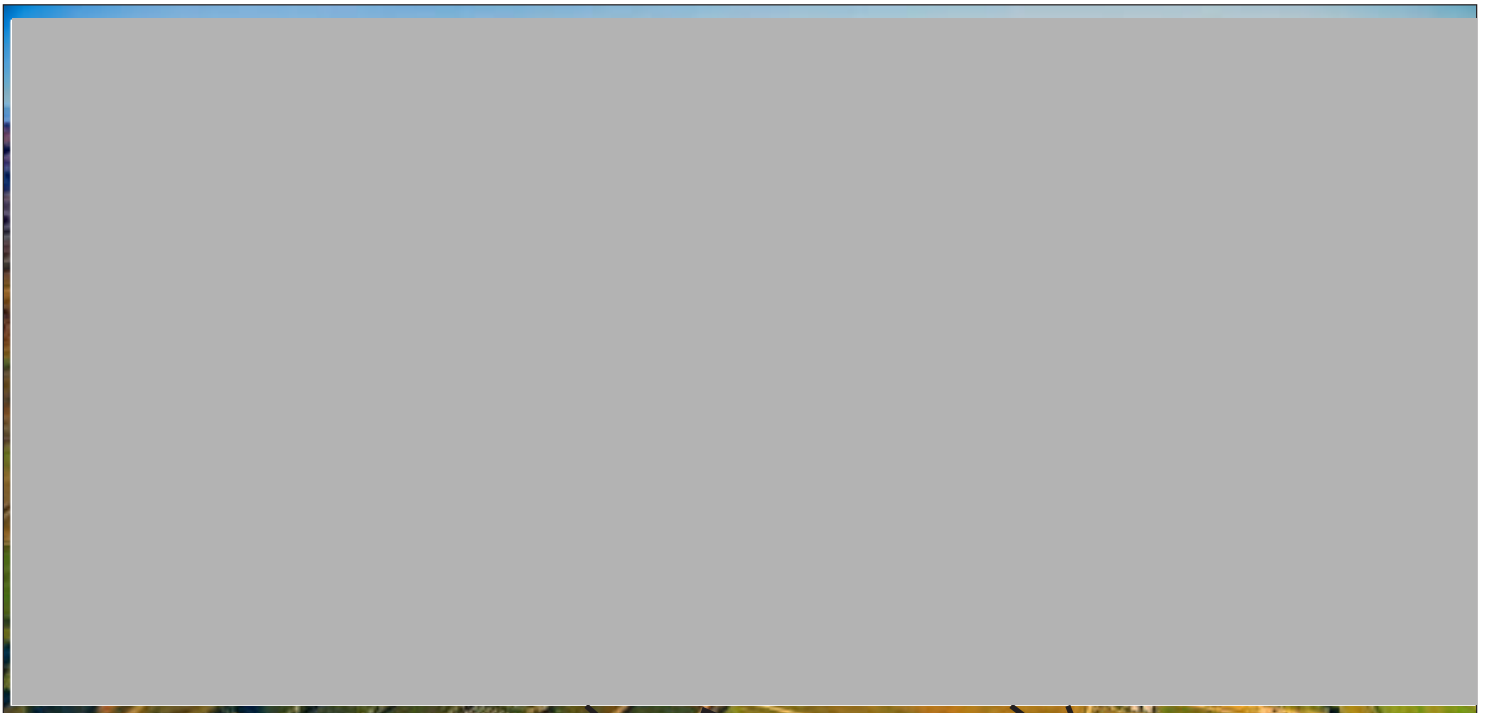


**Key**

**Resource E: Satellite photograph of Roxburgh East**



**Resource F: Aerial photograph of Roxburgh East**



Shelter belts

Storage dams

**Resource G: Climate statistics for the Roxburgh area**

Monthly climate statistics for the Roxburgh area												
	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
Rainfall (mm)	■	■	■	■	■	■	■	■	■	■	■	■
Temperature (°C)	■	■	■	■	■	■	■	■	■	■	■	■

Seasonal climate statistics for the Roxburgh area				
	Summer	Autumn	Winter	Spring
Total rainfall (mm)	■	■	■	■
Average temperature (°C)	—	■	■	■

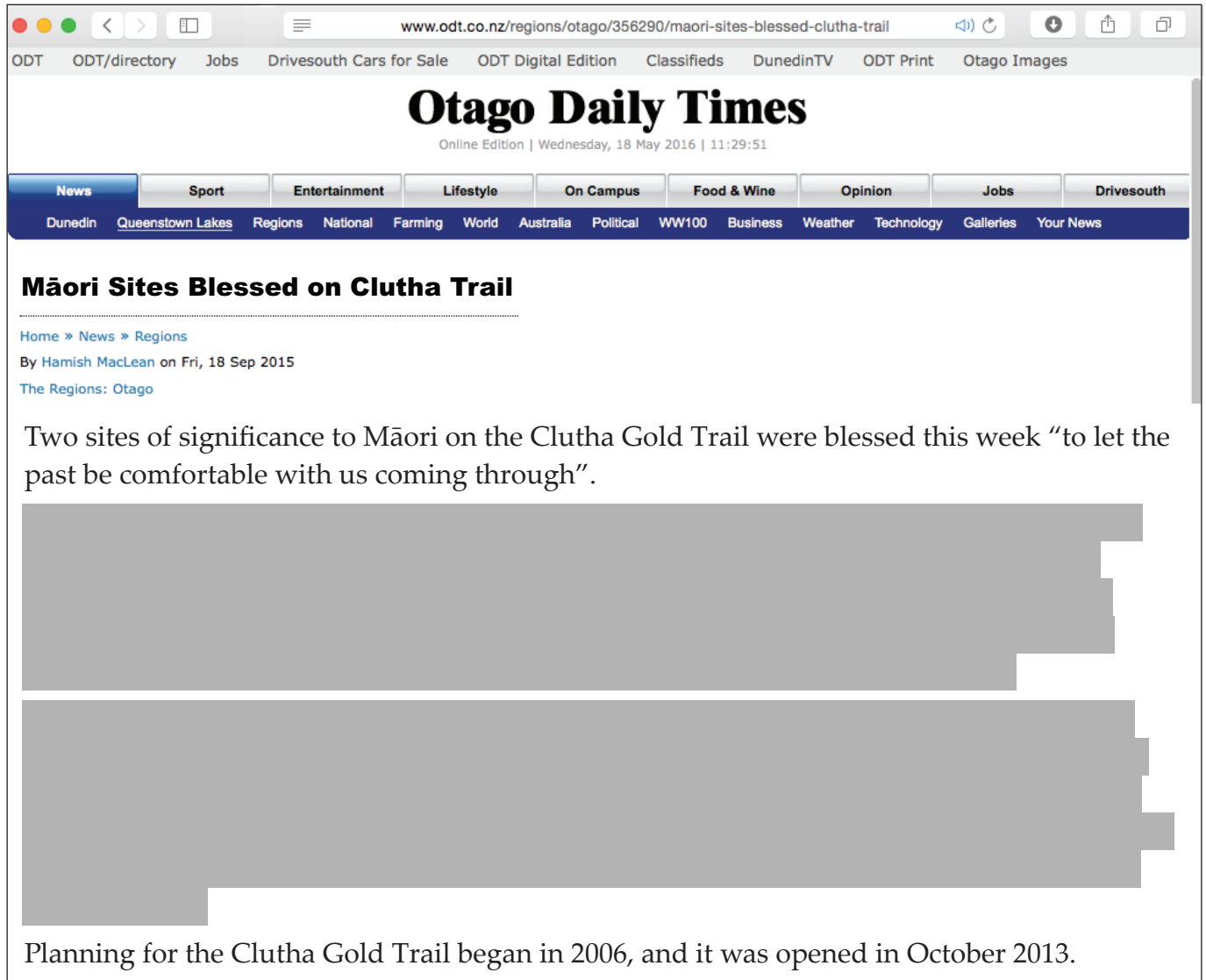
**Resource H: Apple growing**

Roxburgh is one of several major apple growing areas in New Zealand.



Picking of apples takes place from late February to May. Apples are graded and packed in the orchard's sheds.



**Resource I: Significance to Māori**

The screenshot shows a web browser window with the URL [www.odt.co.nz/regions/otago/356290/maori-sites-blessed-clutha-trail](http://www.odt.co.nz/regions/otago/356290/maori-sites-blessed-clutha-trail). The page header includes navigation links for ODT, ODT/directory, Jobs, Drivesouth Cars for Sale, ODT Digital Edition, Classifieds, DunedinTV, ODT Print, and Otago Images. The main title is "Otago Daily Times" with the subtitle "Online Edition | Wednesday, 18 May 2016 | 11:29:51". The navigation menu includes News, Sport, Entertainment, Lifestyle, On Campus, Food & Wine, Opinion, Jobs, and Drivesouth. Below the menu, there are sub-links for Dunedin, Queenstown Lakes, Regions, National, Farming, World, Australia, Political, WW100, Business, Weather, Technology, Galleries, and Your News.

## Māori Sites Blessed on Clutha Trail

[Home](#) » [News](#) » [Regions](#)  
By Hamish MacLean on Fri, 18 Sep 2015  
The Regions: [Otago](#)

Two sites of significance to Māori on the Clutha Gold Trail were blessed this week “to let the past be comfortable with us coming through”.

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Planning for the Clutha Gold Trail began in 2006, and it was opened in October 2013.

## Acknowledgements

Material from the following sources has been adapted for use in this examination (accessed 23 May 2016).

### Resource A

[https://en.wikipedia.org/wiki/Clutha\\_River](https://en.wikipedia.org/wiki/Clutha_River)

<http://www.teara.govt.nz/en/otago-places/page-14>.

### Resource B

<http://208.131.150.31/~nzcyclet/wp-content/uploads/2015/08/nzct-printable-map.pdf>.

### Resource C

<http://nzcycletrail.com/trails/clutha-gold-trail/>

*AA Traveller: The New Zealand Cycle Trail Guide* (Auckland: AA Tourism Publishing Ltd, 2015), p. 132.

### Resource D

<http://www.linz.govt.nz/land/maps/linz-topographic-maps/map-chooser/map-chooser---cd13---roxburgh>.

### Resource E

Google Earth.

### Resource F

[http://www.newzealandstocklibrary.co.nz/gallery/South\\_Island/OTAGO/Roxburgh/NZSL-SB-004802.jpg](http://www.newzealandstocklibrary.co.nz/gallery/South_Island/OTAGO/Roxburgh/NZSL-SB-004802.jpg).

### Resource G

<http://www.climate-charts.com/Locations/n/NZ93000001595320.php> (rainfall)

[http://www.yr.no/place/New\\_Zealand/Otago/Roxburgh/statistics.html](http://www.yr.no/place/New_Zealand/Otago/Roxburgh/statistics.html) (temperature).

### Resource H

Southern Orchards, Kinaston Road, Roxburgh East, Roxburgh, Otago.

### Resource I

Hamish MacLean, *Otago Daily Times*, <http://www.odt.co.nz/regions/otago/356290/maori-sites-blessed-clutha-trail>.



