

91935R



Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 1 Geography 2024

**91935 Demonstrate understanding of decision-making
in response to a geographic challenge
in the wider Pacific region**

Credits: Five

RESOURCE BOOKLET

Refer to this booklet to answer the questions for Geography 91935.

Check that this booklet has pages 2–19 in the correct order and that none of these pages is blank.

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

INSTRUCTIONS

Use these resources to complete the assessment for Geography 91935.

Note Resources A–I (pages 8–17) are **the same as** the material supplied to you in class.

Pages 2–6 contain **new resource material**. Make sure you read this before beginning your answers.

RESOURCE 1: The issue of vehicle access on New Zealand's beaches

The issue of vehicles on beaches is a common concern in many places in New Zealand, including Waimārama Beach. Te Manatū Waka, the Ministry of Transport, says that between 2013 and 2017 there were 75 car crashes on New Zealand beaches, with nine people killed and 47 seriously injured.



Photo (i): Beach access sign at Waimārama.



The current situation regarding vehicle access at Waimārama Beach



● Beach access point

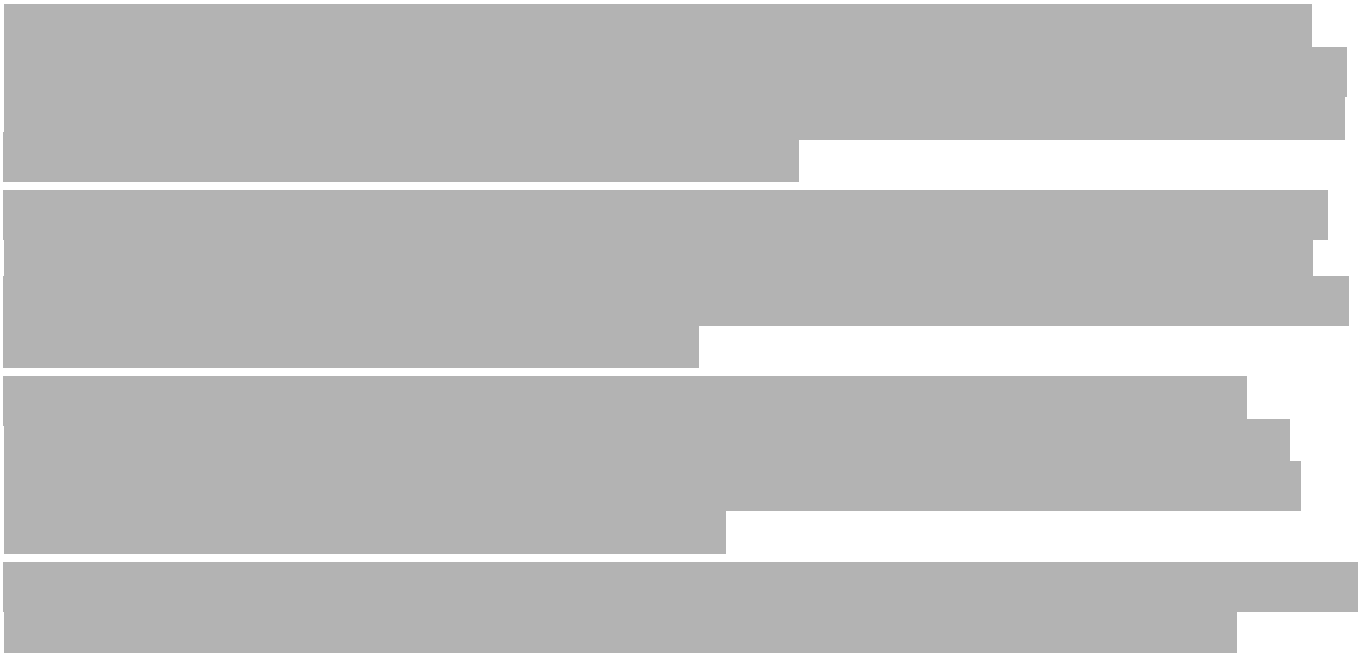
Satellite image (i):
Vehicle access points at Waimārama.

Currently, vehicles can access most of Waimārama Beach. However, the Hastings District Council has placed a vehicle ban on the beach in front of the Waimārama Domain Reserve. Driving on this part of the beach is banned between 8 a.m. and 8 p.m. from Labour Weekend (the end of October) until 1 April. Driving at speeds over 20 km/h is illegal at all times on any part of the beach.



Satellite image (ii): Vehicle ban zone next to Waimārama Domain Reserve.

Unfortunately, the Hastings District Council and police can't manage traffic on the beach 24 hours a day, and consequently the ban is not being enforced.



RESOURCE 2: Viewpoints on the vehicle beach-access issue

Jason and Kelly Smith – surfcasters

Jason and Kelly Smith have been using vehicles to transport fishing gear down Waimārama Beach for over 40 years.

Jason said, “A full vehicle ban is not what us surfcasters want.”



Photo (ii): Surfcasting at the beach.



Ngāti Kahungunu iwi

Last summer, an iwi representative organised the placement of large limestone boulders (left) at the beach end of Tiakitai Road, blocking vehicle access to the northern part of Waimārama Beach.



Photo (iii):

Blocked vehicle access at Tiakitai Road.



Sophie Stevens – Waimārama resident

“There’s a culture now that the beach is somewhere to come and play in your vehicles. The beach is often used like a racetrack. Locals and other beach users are experiencing a greater number of ‘intimidating encounters’ with motorists on the beach.



Photo (iv): Car doing donuts at the beach.



Peter Johnston – Waimārama resident

“This has been a problem that has continued to get worse in recent years. The vehicle damage to the north end on the beach is very bad and the sustainability of the dunes has been seriously compromised by vehicles driving through here.



Photo (v): Erosion of the dune at the Tiakitai Road access.



RESOURCE 3: Hastings District Council surveys the public

In 2023, Hastings' mayor acknowledged the community's growing concern over reckless driving on the beach and expressed a commitment to ensuring people's safety. She said that the Hastings District Council (HDC) wanted to support them in whatever way it could. "Safety at Waimārama Beach is a whole-of-community issue, and we want any action we take to be directed by our community."

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The resources continue on the following page.**

RESOURCE A: Introducing Waimārama

Waimārama is a small, seaside community located 30 kilometres (a 40-minute drive) south-east of Hastings. It is a popular holiday destination in the Hawke's Bay region for swimming, surfing, and fishing.

Approximately 1,020 people live in the wider Waimārama area, while 230 live within the settlement.

Waimārama is situated on alluvial flats that are surrounded by coastal ranges. The flats are dissected by four streams. The Pouhōkio and the Waingongoro drain the upper reaches of the Maraetotara Plateau. The Rotoiti and Papawera streams drain local ranges to the north and south.

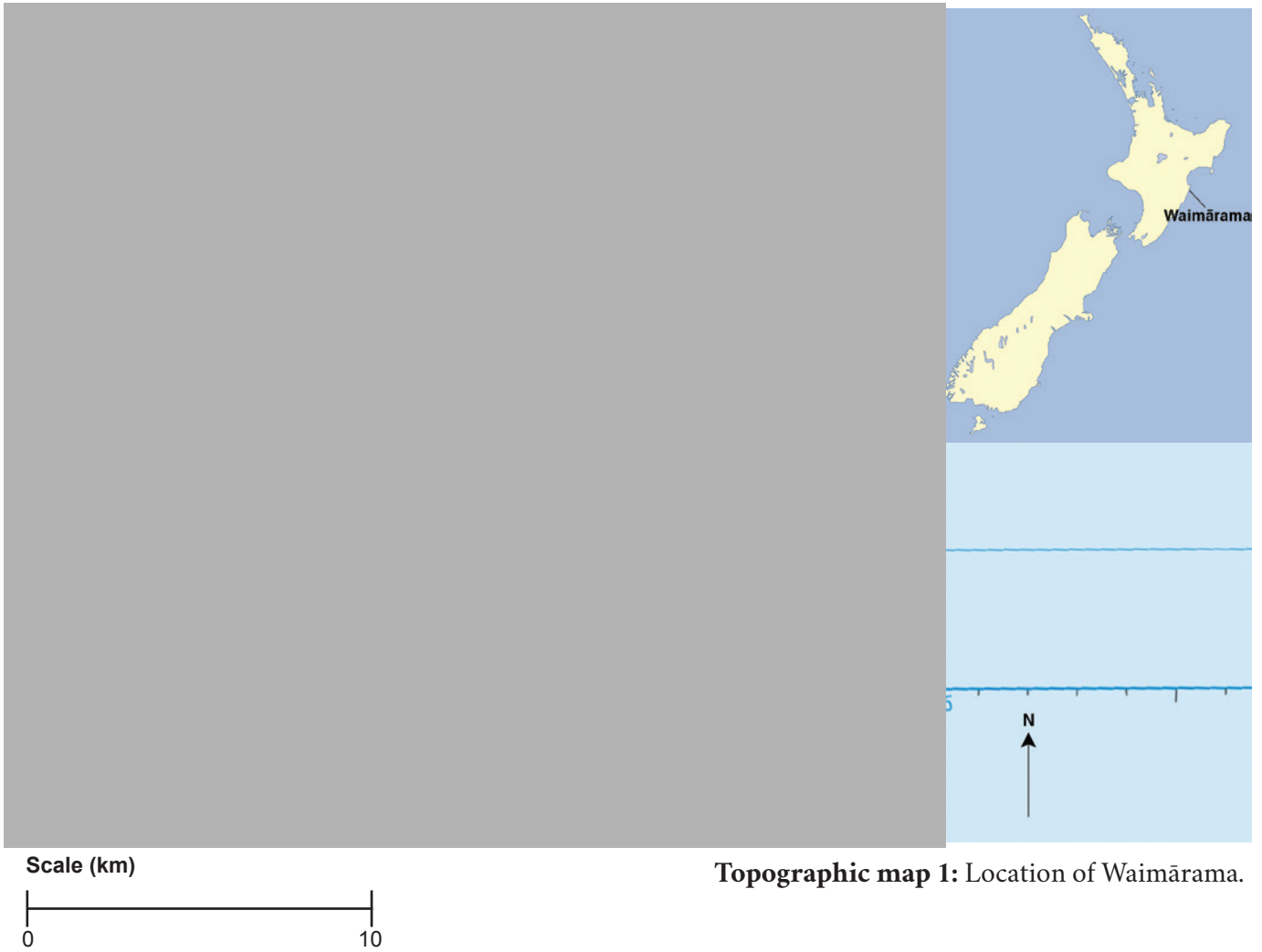
The ancient Māori fortress of Hakikino overlooks the area. It is one of several great east coast battlements and was occupied by Rangitāne iwi.



Photo 3: Te Motu-o-Kura / Bare Island with Kuku rocks (the reef) in the foreground.

Kuku rocks (commonly referred to as “the reef”) have had a major influence on the people who have settled in the area over the years. The rocks jut out of the beach into the waves and therefore provide some shelter from them.

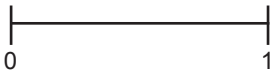


RESOURCE B: Location of Waimārama



Topographic map 2: Features of Waimārama.

Scale (km)



RESOURCE C: Features of Waimārama



● Beach access

Satellite image 1:
Features of Waimārama.

RESOURCE D: Waimārama history

Date	Event
14th century	Rangitāne settles in the area.
1350 (approx)	The Tākitimu waka takes part in a planned migration and arrives at Waimārama. Four priests are left behind and marry into the Rangitāne iwi.
1550 (approx)	Ngāti Kahungunu invade Waimārama. A last stand is made at Hakikino but the Rangitāne people are defeated.
1769	Captain Cook and the <i>Endeavour</i> sail past Waimārama. Cook names the island off the coast “Bare Island” due to its lack of vegetation.
1822	Waikato iwi attack Kahungunu-held areas (including Waimārama). Many Kahungunu flee to the relative safety of Māhia, reducing the Māori population in Waimārama.
1840	Te Tiriti o Waitangi is signed by Waimārama chief Harawira Mahikai.
1860s	The “Waimārama Block”, some 35,000 acres of land, is leased to two European farmers.
1904	Red Bridge is built over the Tukituki River, connecting the Waimārama area to the more populated Heretaunga Plains found further north.
1911	The beach settlement of Waimārama is established.
1950	Waimārama Surf Life Saving Club is established.

RESOURCE E: Waimārama settlement population**Table 1: Census population**

1996	2001	2006	2013	2018	2023
210	200	230	198	220	230

Population density (2022) = 141/km²

Table 2: Population structure (2022)

Gender	Number	%
Male	120	52.2
Female	110	47.8

Table 3: Main age groups (2022)

Age group	Number	%
0–14 years	30	13
15–64 years	140	61
65+ years	60	26

Table 4: Age and gender distribution (2022)

Age distribution	Number of males	Number of females
0–9 years	10	5
10–19 years	20	15
20–29 years	10	10
30–39 years	15	5
40–49 years	10	5
50–59 years	20	20
60–69 years	25	30
70–79 years	10	15
80–89 years	0	5

Table 5: Ethnic composition (2022)

Ethnic group	Waimārama (%)	New Zealand (%)
European	75	70
Māori	29	17
Pacific peoples	3	8
Asian	1	15
Other	3	3

Note: the table above does not add to 100%, as some people surveyed identified with more than one ethnic group.

RESOURCE F: Waimārama's beaches

Photo 4: Waimārama's northern beach showing the surf on one side and the dunes on the other.



Photo 5: Boat launching at Kuku rocks (the reef).



Photo 6: A popular spot for beachgoers in the summer.

RESOURCE G: Surf lifeguard statistics – Waimārama Beach 2013–23

The Waimārama Surf Life Saving Club was established in 1950. The watchtower sits on the dune at the edge of the Waimārama Domain Reserve. It overlooks the most popular part of the beach and is manned by club members between the months of November and March.



Photo 7: Waimārama Surf Life Saving Club watchtower.

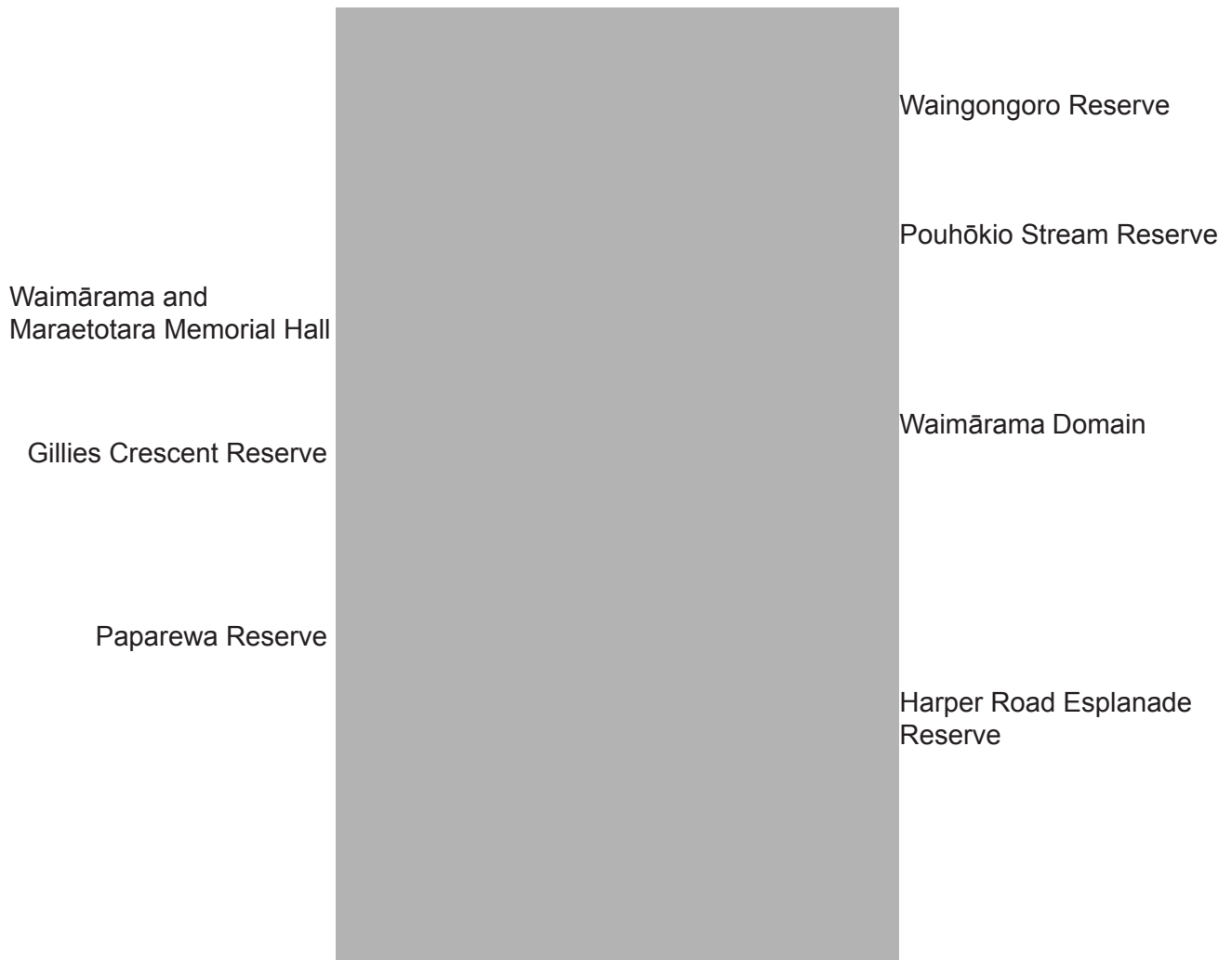
Table 6: Safety interventions and rescues carried out by Waimārama Surf Life Saving Club 2013–23

Season	Safety interventions*	Rescues at Waimārama
2013 / 14	2649	2
2014 / 15	2098	22
2015 / 16	2097	16
2016 / 17	5583	2
2017 / 18	6827	15
2018 / 19	4718	3
2019 / 20	1865	12
2020 / 21	2878	4
2021 / 22	5161	12
2022 / 23	3007	13

* setting safe swimming areas, minor first aid, advice, vehicular access.

RESOURCE H: Waimārama Reserves

Waimārama has seven distinct reserves covering 18.18 hectares. Five kilometres of beachfront are included in the reserves.



Satellite image 2: Waimārama reserves.

All of the reserves within Waimārama are categorised as coastal reserves. Coastal reserves are those provided along the coastal margin, ranging from highly developed, high-use recreation areas, through to undeveloped natural areas. Reserves such as the Waimārama Domain provide for informal recreation use associated with the beach and may contain mown grass, tree and shrub planting, roading, toilets, play equipment, and access to the beach. Other reserves such as Harper Road Esplanade and Waingongoro Reserve are largely undeveloped and provide protection of the coastal dune systems and residential properties located along the coastal strip.

RESOURCE I: The Waimārama dunes

Dunes are an important part of any coastline. They are accumulations of sand that have been blown by wind and trapped on obstacles such as driftwood or vegetation. Dunes help protect coastlines from erosion. If a coastline erodes, it will move inland, and this is particularly concerning in areas where people live and / or work.



The northern dunes

The northern section of the Waimārama Beach dune system is relatively stable and generally protects the beach from erosion. This is because it receives a steady supply of sand from erosion and longshore drift that comes further from the south.

Photo 8: The northern dunes.

The Domain dunes

The area of beach adjacent to the Domain is at risk from inundation from the sea. Throughout the year, waves transport sand from the beach out to sea, and then back again. Winter storms lower the beach by over a metre and move hundreds of cubic metres of sand offshore to build offshore sand bars. This sand is returned by smaller swells of summer to prepare for the next winter. Breaches of the dune system adjacent to the Domain have occurred in the past and so significant action has been taken to protect the dune. This includes:

- Fencing off the dunes to stop people walking over them.
- Extensive planting of vegetation to stabilise the dunes.
- Providing boardwalk accessways from the Domain to the beach to control people movement.

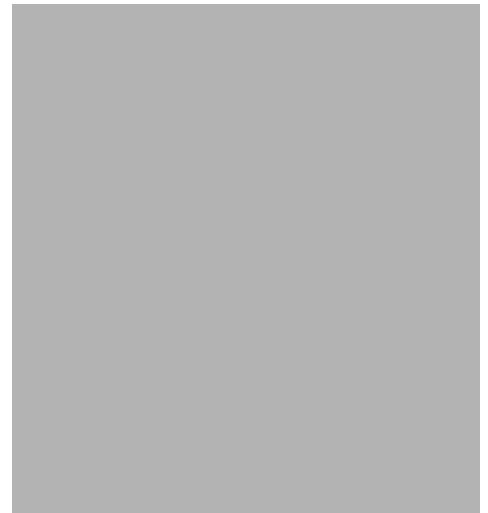


Photo 9: The Domain dunes.

Southern beach sea wall

Southern Waimārama beach has experienced erosion rates up to 0.85 m/year. The beach sand supply is heavily dependent on occasional pulses of sediment generated by major coastal slips from cliffs further to the south. The beach is re-nourished by these events, but then gradually erodes until a new slip occurs (which can be many decades later). Because of this, a sea wall containing large limestone boulders has been placed along the Harper Road Esplanade Reserve, to protect this part of the coastline.



Photo 10: The southern beach sea wall.

Acknowledgements

Material from the following sources has been adapted for use in this assessment:

Resource 1

<https://www.stuff.co.nz/nz-news/350155835/why-can-you-drive-some-beaches-new-zealand-and-not-others>
<https://earth.google.com/>
<https://www.hastingsdc.govt.nz/home/article/2953/feedback-wanted-on-vehicle-use-at-waimarama-beach>
<https://www.hastingsdc.govt.nz/home/article/2915/calls-for-caution-driving-on-waimarama-beach>
<https://www.hastingsdc.govt.nz/hastings/beaches/waimarama-beach/vehicles-on-waimarama-beach/>

Resource 2

<https://www.fishing.net.nz/fishing-advice/how-to/surfcasting-for-big-snapper/>
<https://www.nzherald.co.nz/hawkes-bay-today/news/waimarama-beach-council-to-float-permanent-ban-of-vehicles-on-beach/6MZPVEAPENG17CQHTRVZV5HYSM/>
<https://www.nzherald.co.nz/hawkes-bay-today/news/hawkes-bay-ngati-kahungunu-iwi-boss-bayden-barber-blocks-vehicle-access-to-waimarama-beach/XJODAK3JCJF7BL3Z6DIZWOZGUE/>
<https://waateanews.com/2023/12/13/iwi-leader-puts-hoon-block-on-waimarama-beach-access/>
<https://www.newstalkzb.co.nz/news/national/driving-on-waimarama-beach-disruptive-and-frightening-claim-residents-pushing-for-change/>
<https://www.facebook.com/SophieforHBRC/photos/a.104971067529122/361577331868493/?type=3>
<https://www.stuff.co.nz/nz-news/350155835/why-can-you-drive-some-beaches-new-zealand-and-not-others>
<https://baybuzz.co.nz/waimarama-beach-speedway>

Resource 3

<https://insidegovernment.co.nz/community-feedback-sought-on-waimarama-beach-safety/>
<https://insidegovernment.co.nz/calls-for-driver-caution-on-waimarama-beach-ahead-of-long-weekend/>

Resource A

<https://www.shutterstock.com/image-photo/view-down-bare-island-coastal-settlement-20901403>
<https://www.hastingsdc.govt.nz/assets/Document-Library/Reserve-Management-Plans/Grouped-reserves-plans/waimarama-reserves-management-plan-no9.pdf>
<https://stock.adobe.com/nz/images/dramatic-scenery-of-bare-island-off-the-shore-at-waimarama-beach-in-hawkes-bay/298185236>
<https://knowledgebank.org.nz/wp-content/uploads/node/525801/master/Waimarama.pdf>
<https://nzarchaeology.org/download/history-and-archaeological-sites-of-motu-o-kura-bare-island-hawkes-bay>

Resource B

<https://www.topomap.co.nz/NZTopoMap?v=2&ll=-39.74448,176.913528&z=11>
https://commons.wikimedia.org/wiki/File:Map_of_New_Zealand_%28blank%29.svg

Resource C

<https://earth.google.com/>

Resource D

<https://knowledgebank.org.nz/wp-content/uploads/node/525801/master/Waimarama.pdf>
<https://nzarchaeology.org/download/history-and-archaeological-sites-of-motu-o-kura-bare-island-hawkes-bay>

Resource E

https://www.citypopulation.de/en/newzealand/northisland/hawkes_bay/1294__waim%C4%81rama/
<https://www.stats.govt.nz/>

Resource F

<https://www.ngakereru.com/photos>
<https://boatingnz.co.nz/boat-reviews/senator-650-ht-jet/>
<https://www.nzherald.co.nz/hawkes-bay-today/news/editorial-sad-to-say-goodbye-to-waimarama-beach-day/ZOLRXZV2FAQMOURWEIRRRMHXM4/>

Resource G

<https://www.surflifesaving.org.nz/about-us/key-documents/annual-reports>
<https://designgroup.co.nz/waimarama-surf-tower>

Resource H

<https://www.hastingsdc.govt.nz/assets/Document-Library/Reserve-Management-Plans/Grouped-reserves-plans/waimarama-reserves-management-plan-no9.pdf>
<https://earth.google.com/>

Resource I

<https://www.hastingsdc.govt.nz/assets/Document-Library/Reserve-Management-Plans/Grouped-reserves-plans/waimarama-reserves-management-plan-no9.pdf>

<https://baybuzz.co.nz/controversy-renews-at-ocean-beach/>

