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91934



Draw a cross through the box (☒) if you have NOT written in this booklet

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Mana Tohu Mātauranga o Aotearoa
New Zealand Qualifications Authority

Level 1 Geography 2025

91934 Demonstrate understanding of how natural processes shape an environment

Credits: Five

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of how natural processes shape an environment.	Explain how natural processes shape an environment.	Examine how natural processes shape an environment.

Check that the National Student Number (NSN) on your admission slip is the same as the number at the top of this page.

There are two sections in this booklet. Answer the question parts for ONE resource from Section One. Answer BOTH parts of Section Two.

If you need more room for any answer, use the extra space provided at the back of this booklet.

Check that this booklet has pages 2–15 in the correct order and that none of these pages is blank.

Do not write in the margins (//////). This area will be cut off when the booklet is marked.

YOU MUST HAND THIS BOOKLET TO THE SUPERVISOR AT THE END OF THE EXAMINATION.

Merit

TOTAL 05

INSTRUCTIONS

There are two sections in this assessment.

Section One

This section contains resources from three unfamiliar environments. Choose ONE of these resources and answer the corresponding question parts.

Use *EITHER*

- Resource A (pages 4–5) *OR*
- Resource B (pages 6–7) *OR*
- Resource C (pages 8–9).

Section Two

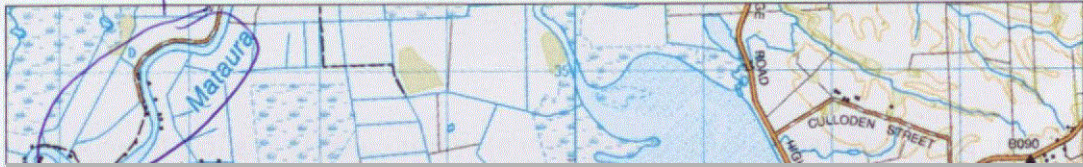
Answer BOTH parts of this section (pages 10–11).

Note: a key to the topographic maps is provided on page 14. It is for reference only and it is not necessary to refer to it in order to complete the assessment.

OR: RESOURCE C

meanders

Topographic map of the Toetoes Harbour area



Spit



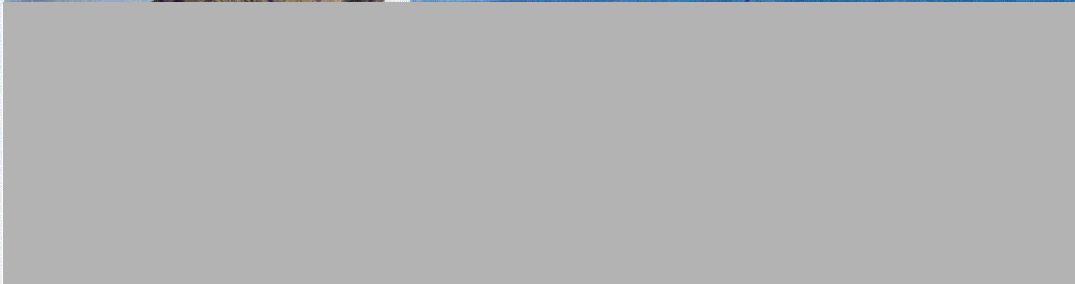
Cliff

Images of the Toetoes Harbour area

Flood Plain



Spit



meanders

Answer here if you are choosing to use **Resource C**. (Use the extra space on pages 12–13 if needed.)

- (i) Name TWO processes that would have operated to shape the environment shown in Resource C.

Process 1: Long shore Drift (LSD)

Process 2: Fluvial processes

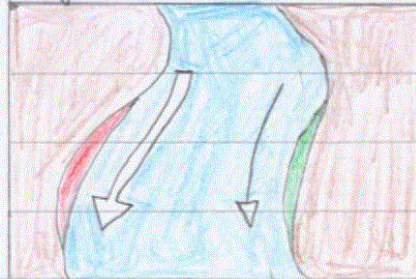
- (ii) Label the topographic map and/or photograph(s) in Resource C to show a range of features that have been shaped by the processes you named in part (i).

- (iii) Explain how two of the features you labelled in part (ii) were formed by the processes you named in part (i). In your answer, refer to Resource C and use geographic terminology.

Feature 1: There is a spit that I have labeled on both the map and the photo. Spits are formed by the process of Long shore Drift (LSD). LSD is the combination of two processes, Swash and back wash, working together to create phenomena like spits. This is done by waves hitting a beach at an angle which deposits sediment from the ocean, known as swash. Then the waves retreat perpendicular to where they hit the beach, eroding sediment from the beach, known as swash. → continued at extra page.

Feature 2: The meanders in the river I labeled is formed by the fluvial processes of erosion and deposition. When a river

Diagram of how Meanders form



KEY:
█ = river
█ = erosion of sediment
█ = deposition of sediment
█ = original river bank
↘ = strong current
↓ = weak current

comes around a slight bend the current on the outside of the bend will become stronger than the current on the inside of the bend.

This causes the strong current to erode more sediment from the ~~river~~ river bank, whilst the weak current will deposit more sediment at the inside river bank that it has transported from up stream. Over time

the slight bend in the river will start to curve more, making the strong current stronger and the weak current weaker, causing the bend to curve ever more which form a meander as seen in my diagram

Turn to page 10 for Section Two ▶

SECTION TWO

This section is based on a case study or studies you have studied this year. Use this case study to answer BOTH parts of Section Two. Name your case study environment below.

Case study environment: southern Alps

- (iv) Explain how TWO natural processes operating in your case study environment have influenced cultural features.

Cultural features can include but are not limited to:

- transport routes (roads, railways, ports, etc.)
- buildings (houses, shops, marae, etc.)
- land use (agriculture, industry, residential, etc.)
- the economy
- infrastructure.

In your answer, include case study evidence and geographic terminology.

Tectonic processes are the most influential to cultural features as they are what initially formed the southern Alps. The creation of the southern Alps from tectonic processes heavily influenced the construction and development of transport routes in and around the southern Alps. ~~Engineers and architects alike~~ with the vast array of different elevations in the mountainous terrain of the southern Alps, engineers and architects alike would have to put extra special care and consideration into designing and constructing roads that go through the southern Alps. This is because the lack of flat area leads to extra features needing to be added to roads going through the Alps like bridges, fences and supports so that cars can safely travel without the troubles of navigating unpredictable terrain. This leads to roads in the southern Alps looking very different to roads you might find

in a traditional urban area, with the addition of extra support. Glacial processes are also highly influential to cultural features in the southern Alps as they are one of the main processes in charge of shaping the southern Alps. Glacial processes create natural features in the southern Alps like U-shaped valleys which run down many parts of the southern Alps. These U-shaped valleys also take a part in influencing cultural features like the construction and development of roads. Having these giant U-shaped valleys throughout the southern Alps would lead the creators of the roads to have to diverge the directions of some roads as to avoid U-shaped valleys.

- (v) Examine how the natural processes in your case study environment may have implications for people in the future.

In your answer, include case study evidence and geographic terminology. You may include map(s) and/or diagram(s) to support your answer.

With the Southern Alps being located on the plate boundary between the Australian and Pacific Plates there tends to be a lot of tectonic processes taking place. It is also said that there is a 75% chance of a major earthquake to occur along the southern Alps in the next 50 years. If this earthquake were to occur it would lead to significant negative for the people located in and around the southern Alps. Two negative implications that go hand in hand are damage to roads and injuries. In the event ~~extra~~ of a major earthquake, most roads would likely be damaged or closed off from landslides, terrain changes and roads collapsing. This would lead to some people who live in the southern Alps being totally stranded as there are no open roads for them to leave. Also if these stranded individuals are seriously injured and in need of medical - ↗

Extra space if required.

Write the question number(s) if applicable.

QUESTION
NUMBER

Section 1, resource C, question iii feature 1 continuation:

This collaboration of swash and back wash continue along the beach to over time form a spit, which will getter bigger as LSD continues to act upon it.

Section 2 question V:

attention, they may not be able to receive the treatment they need which would lead to them suffering an injury that will affect them for life, experiencing way worse symptoms than they should have or loss of life. This abundance of seriously injured and/or stranded individuals would also result in negative implications for the local economy which would affect even more people. This is because for a period of time these impacted individuals won't be able to attend their job for reasons such as road closures keeping them stuck at home, serious injuries that require time of work, the loss of life of a loved one causing grievances or the loss of the own persons life. No matter the reason, there is an increased amount of individuals not able to attend their job. This would lead to businesses not being able to properly operate for the time being with an increased absence of employs which may even result in the business having to shut down. The closure of businesses would lead to originally unaffected individual not being

Extra space if required.

Write the question number(s) if applicable.

QUESTION
NUMBER

able to purchase the goods and services from the previously open, now shut down businesses. This would cause more individuals not being able to have access to basic necessities. This is a very ~~serious~~ severe ~~from~~ negative implication for the residents located in the southern Alps area as they aren't able to gain access to certain items which could result in them relocating to another area in the country to live as the area in and around the southern Alps isn't habitable enough for them anymore. This is why I think that the tectonic processes in the southern Alps, ~~causing~~ having a 75% change of causing a major earthquake in the next 50 years will have highly negative implications on people in the future as they will face damage to their health, local economy, ability to access goods and services and transport around the area.

Acknowledgements

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

Resource A

Map: <https://www.topomap.co.nz/NZTopoMap?v=2&ll=-43.645268,170.130844&z=12>

Images: <https://southernlight.co.nz/category/environments/glaciers/>

<https://myfavouriteescapes.com/the-best-mt-cook-hikes/>

Resource B

Map: <https://www.topomap.co.nz/NZTopoMap?v=2&ll=-38.416207,176.783066&z=12>

Images: <https://commons.wikimedia.org/wiki/File:Murupara-Galatea.jpg>

<https://media-cdn.tripadvisor.com/media/photo-s/05/37/4a/e1/murupara-motor-camp.jpg>

Resource C

Map: <https://www.topomap.co.nz/NZTopoMap?v=2&ll=-46.577979,168.775063&z=14>

Images: <https://media-cdn.tripadvisor.com/media/photo-s/1c/9f/5a/6f/photo2jpg.jpg>

https://www.davidwallphoto.com/detail/13259-Whitebaiters-Sheds,-Mataura-River-near-Mouth-at-Toetoes-Bay,-Southland_-_aerial.html

Page 14

<https://www.topomap.co.nz/Topo50Legend>

Merit

Subject: Geography

Standard: 91934

Total score: 05

Grade score	Marker commentary
M5	<p>Part A A range of phenomena and/or features appropriately labelled. Both longshore drift and fluvial processes are linked to two of the labelled features. A clear sequencing of both processes is evident.</p> <p>Part B A dissimilar environment to the one in Part A has been chosen, but this is acceptable for this assessment.</p> <p>The impacts of plate tectonics and glacial processes have been explained in terms of their influence on the location of transportation routes. However, the question refers to cultural features, and this candidate has discussed only one – roading. Further discussion on the impacts of natural processes on cultural features such as the economy would have been beneficial.</p> <p>The implications of a future earthquake (because of plate tectonics) on transportation and subsequent isolation issues are explained.</p> <p>Geographic terminology is used throughout.</p> <p>Case study evidence is used but not integrated. Specific references to the names of roads, place names, etc. would have helped to support the response in Part B.</p>