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91427



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

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Mana Tohu Mātauranga o Aotearoa  
New Zealand Qualifications Authority

## Level 3 Geography 2024

### 91427 Demonstrate understanding of how a cultural process shapes geographic environment(s)

Credits: Four

Achievement	Achievement with Merit	Achievement with Excellence
Demonstrate understanding of how a cultural process shapes geographic environment(s).	Demonstrate in-depth understanding of how a cultural process shapes geographic environment(s).	Demonstrate comprehensive understanding of how a cultural process shapes geographic environment(s).

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

**There is ONE question to answer in this booklet.**

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

Check that this booklet has pages 2–8 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.**

**Excellence**

**TOTAL 07**



**QUESTION**

How does a cultural process **operate** to **impact** a geographic environment(s) you have studied?

In your response:

- name a cultural process and the geographic environment(s) that are shaped by it
- construct a supporting annotated map or diagram in the space provided on page 3
- integrate comprehensive supporting case study evidence
- you may integrate other annotated maps and diagrams to support your answer.

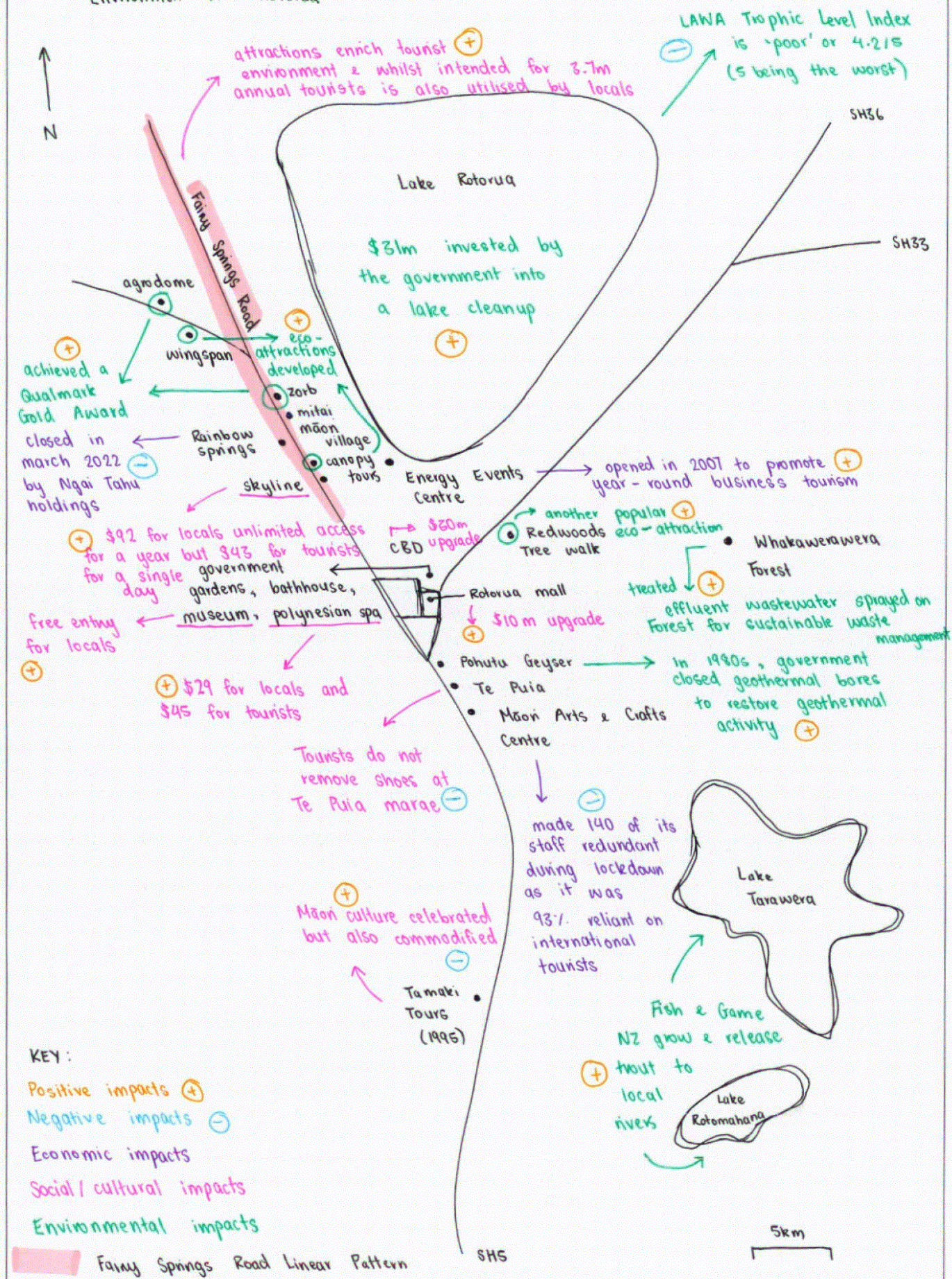
You may use the space below to plan your response.

**PLANNING**



## MAP/DIAGRAM

**Title:** Map showing the Impacts of Tourism Development on the Geographic Environment of Rotorua





The operation of tourism development (a cultural process) has been ongoing in Rotorua for over 150 years. During this period, there have been many changes made to cater to the 3.7 m annual tourists. There have been a myriad of impacts on the economic, social & natural environments due to the continued operation of tourism development in Rotorua.

The operation of tourism development has had positive economic impacts on the environment of Rotorua. The key regulators of the Government & Rotorua District Council have invested into the development of accommodation, facilities & attractions to support an influx of tourists. The operation of tourism development in Rotorua have had significant impacts on the economic environment (and financial position) of the region. Each year over \$260.4 million of tourism spending on accommodation, services & amenities are contributed to the economy which makes up 10.5% of the region's GDP. The annual tourist receipts sum to over \$850 m : \$100m spent on retail and \$60m spent on accommodation. Local businesses must increase supply to meet rising demands of an influx of tourists which creates job opportunities. In Rotorua, 1 in every 5 people are employed in the tourism sector and for every 240 tourists a new full-time job is created. There are 3,500 people directly and 5,700 people indirectly employed in tourism. The food services & accommodation sector was the largest contributor to employment growth adding 173 jobs in 2022 & 2023 followed by arts / recreation which added 150 jobs, both of which are tourism related. High employment levels due to the operation of tourism development in Rotorua impacts the economic environment as poverty decreases. Those involved <sup>with jobs</sup> in the tourism industry can provide for themselves & their families which improves long-term education & health outcomes. Another positive economic impact is that the profitability of attractions & facilities such as the Energy Events



Centre & Te Puia (see map) boosts the economy & provides further opportunity for economic development. According to cumulative causation, early Government (key regular) investment creates a self-reinforcing cycle to ensure long-term, sustainable economic & tourism growth. A further \$153m is earned in downstream tourism businesses such as catering, construction & communications. However, the operation of tourism development in Rotorua also have negative economic impacts. Tourism supply & demand is constantly changing thus tourist numbers & income flows are not guaranteed. Inflationary pressures & economic factors can reduce discretionary spending. The volatility of the industry <sup>Rotorua tourism</sup> was evident during COVID-19 when visitor numbers to NZ declined by 98.6%. The infamous Te Puia's Māori Arts & Crafts Centre were forced to make 140 of its staff redundant as it was 98% reliant on international tourists (see map). During this financially unstable period, Rotorua lost \$186m in tourist spending. Another attraction, Rainbow Springs (est. 1932) was closed by the ngai tahu holdings in March 2022 citing high operational / maintenance costs meaning it was no longer financially viable especially due to COVID uncertainty (see map). Another negative economic impact due to the operation of tourism development in Rotorua is the seasonality of jobs. Peak tourism months occur during Dec to May & drops from June to Oct meaning many locals are unemployed during the "off seasons." This can strain the economic environment due to high levels of unemployment. Key regulators such as the Rotorua Local Council recognised this issue so opened the Energy Events Centre (see map) in 2007 to promote year round business tourism and increase job opportunities. These economic dynamics reflect that the operation of tourism development whilst enhancing the economy, also poses detrimental impacts given it is such a



vulnerable industry. Therefore, it is important for regulators to mitigate these economic negatives to reap long-term benefits such as improved facilities & high employment.

There are also many social/cultural impacts that are positive for Rotorua due to the operation of tourism development. The main positive social/cultural impact is the preservation of Māori culture.

Over 57% of international tourists associate Māori culture with Rotorua. Thus this reputation has been leveraged upon by local Māori tribes such as Te Arawa who work alongside regulators such as the Rotorua Council to create cultural attractions such as Tamaki Tours (1995), Mitai Maori Village (2008) & Te Puia / Māori Arts & Crafts Centre (1863) (see map). Both locals & tourists revive māori traditions and many cultural attractions support mana whenua (local iwi). However, some aspects of Māori culture have also been commodified & is tokenistic. The ~~p~~ term 'plastic tiki tourism' has been coined to depict the manipulation of māori culture to suit tourist needs. For example, traditional haka & poi performances have been shortened to fit tourist schedules, shoes are not taken off at the Te Puia marae which is disrespectful (see map) and pounamu necklaces are sold in souvenir shops ~~as~~ as cheap / plastic objects. Thus, the original value & meaning of māori culture is diminished. Despite cultural dilution, long-term kaitiakitanga (preservation of māori culture) is upheld & māori get to share their culture with global tourists. This is important to shape a cultural environment that local māori can thrive as 40% of Rotorua's 74,000 population is māori. Another social/cultural positive impact due to the operation of tourism development in Rotorua is the access to 100+ attractions by tourists and locals. Key regulators such as the government



continue to diversify these attractions to suit & cater to all tourist markets from psychocentric to allocentric tourists (according to PLOGS model). For example, Fairy Springs Road is a linear pattern with an agglomeration of secondary attractions such as zorb & mitai maori village (see map). Locals in Rotorua also receive various discounts & perks such as free entry to the museum (see map). Other benefits for locals include a \$92 annual pass for unlimited gondola access but tourists are charged \$43 for a single day <sup>(see map)</sup>. Similarly, the Polynesian Pools offers \$29 tickets for locals & \$45 tickets for tourists (see map). Individuals are able to have enhanced wellbeing from visiting this ~~to~~ attraction. However, a social negative impact is the increase in crime which locals claim is due to overtourism & overcrowding. This not only ~~dimish~~ diminishes the reputation of Rotorua as a tourism location but also reduces the safety and security of the geographic environment for both locals & tourists. The Rotorua council (key regular) have worked alongside the NZ police to implement a community safety action plan which has reduced crime rates in 2024. Therefore despite the negative social/cultural impacts of the operation of tourism development in Rotorua, they are far outweighed by the positive impacts of long-term kaitiakitanga and continued development of attractions to enhance the tourism environment (see map for many attractions). Other examples include the Government (key regulator) investment ~~to~~ of \$30m to upgrade the CBD & \$10m to rebuild Rotorua mall (see map) which improve quality of living for locals despite its intention to cater to 3.7m annual tourists.

There are also a multiplicity of environmental impacts on Rotorua due to the operation of tourism development. Many eco-attractions have



Extra space if required.  
Write the question number(s) if applicable.

QUESTION  
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been built to promote eco-tourism (see map) including the Redwoods Tree walk, Canopy Tours & Wingspan (NZ's Bird of Prey conservation centre). These various attractions promote long-term environmental sustainability. Many businesses also aspire to attain the NZ Qualmark Gold Award for being a leading business of sustainable tourism. Both Agrodome and Zorb (see map) have achieved this award & encourage eco-tourism practices among many other local businesses. The organisation Fish & Game NZ also grow & release trout into Rotorua's rivers to increase wildlife biodiversity. This enhances & preserves the natural environment for generations to come. However, the increase of tourism development has also resulted in increased waste disposal, traffic congestion and pollution (air / noise / water) which degrades the environment. For example, <sup>the</sup> LAWA (Land Air Water Aotearoa) ~~has~~ Trophic Level Index for Lake Rotorua <sup>(see map)</sup> is 'poor' or 4.2 / 5 (with 5 being the worst). Hence the government regulators have provided \$31m funding to clean up Lake Rotorua ~~so~~ <sup>to</sup> ensure locals / tourists can still perform water based activities & to reduce pollution. Other efforts have also been made such as spraying treated effluent from the wastewater management plant onto whakawerawera forest <sup>(see map)</sup>. This is beneficial as it provides natural fertilisers for forest growth & reuses wastewater to prevent its disposal in Lake Rotorua. Additionally, in the 1980s, the Government (key regulator) closed all the geothermal bores holes within a 1.5km radius of the Pohutu Geyser (see map). This is because during the stagnation phase of Rotorua's development (1980-1986),



locals & hotels stole geothermal water from bores & used cheap geothermal energy. Hence, the restoration of geothermal activity is important as it contributes to the tourism industry and economy. This however released a distinct smell which was distasteful for locals & tourists (persists today). Despite the increased pollution & waste due to an influx of tourists & operation of tourism development in Rotorua, eco-tourism is promoted and the government (key regulator) has invested \$72.1m to support sustainable tourism for Rotorua in the future.

The operation of tourism development in Rotorua has had both positive & negative (long/short term) impacts on the geographic environment. All human activity has negative impacts but these are outweighed by the employment opportunities, development of 100+ attractions, kaitiakitanga and eco-tourism due to economic, social/cultural & natural environment changes. Therefore, the operation of tourism development in Rotorua will be maintained & continue for generations to come & will remain a leading & sustainable NZ tourist destination.



## Excellence

**Subject:** Geography

**Standard:** 91427

**Total score:** 07

Grade score	Marker commentary
E7	<p>This response shows a clear understanding of the requirements of this question. It focuses on both the operation of the process and the impacts, with clear connections made between the cause and outcome. The answer is logically organised and divided into different types of impacts. Reasoning for each impact is clearly linked to the operation of the process and to the links between elements. The diagram selected is relevant to the question asked and provides helpful evidence to support the written portion of the response. Geographic insight is demonstrated through the structure of the response, geographic terminology, discussion of significance, use of mitigation techniques, and providing clear links between elements throughout the answer.</p>