NATIONAL SENIOR CERTIFICATE EXAMINATION
NOVEMBER 2024

GEOGRAPHY: PAPER II

MARKING GUIDELINES

Time: 1½ hours 100 marks

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QUESTION 1: MAP SKILLS AND MICROCLIMATE

Figure 1: Location Map and Fact File



- Grabouw is situated in the Elgin Valley and lies about an hour (65 km) SE of Cape Town.
- It's predominantly an agricultural area, well-known for its apples and pears.
- The area has also branched into producing canola as well as grapes.
- Annually, it is part of The Festival of Yellow, celebrating the canola fields.
- It is also a well-respected wine region, sporting many great wine estates.
- Grabouw/Elgin is situated close to a UNESCO site, which displays many examples of unique species of mountain fynbos, endemic to South Africa.
- This area has also become very popular in recent years with the mountain biking set and offers great trails for biking.

[Source adapted: <https://www.sahistory.org.za/place/grabouw>]

1.1 Refer to the location map above and **mark** the correct answer.

1.1.1 Grabouw is located in the … province.

Northern Cape	
Eastern Cape	
Southern Cape	
Western Cape	x

1.1.2 The scale of the aerial photograph is … than the topographic map.

five times larger	x
five times smaller	
ten times larger	
ten times smaller	

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1.1.3 The map symbols around Grabouw town indicate the area is dominated by

primary activities.	x
secondary activities.	
tertiary activities.	
quaternary activities.	

1.1.4 The mean magnetic declination for 2024 is

26º 08' West of True North.	
26º 11' West of True North.	
26º 19' West of True North.	
26º 27' West of True North.	x

Calculations: 2024 – 2023 = 1 year 1 × 8' = 8' change 26º 19' + 8' = 26º 27'

1.1.5 The Grabouw plantation north of the railway line is situated on …

a north facing slope.	
a south facing slope.	x
flat land.	
a valley floor.	

1.1.6 The grid reference for Trig Beacon 184 on Hans se Kop (B1/ B2) is …

34º 07' 10” S 18º 57' 00” E.	
18º 58' 00” S 34º 06' 08” E.	
34º 06' 08” S 18º 58' 00” E.	x
18º 57' 00” S 34º 07' 10” E.	

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1.2 Study Photograph 1 and the topographic map 3418BB Somerset West and 3419AA Grabouw.

Photograph 1



[Source: Examiner's photograph]

(a) On the topographic map, the letters C, D, E and F are shown. The photograph above was taken at the road intersection from:

Point C, looking NNE	
Point D, looking NE	
Point E, looking NW	
Point F, looking SE	x

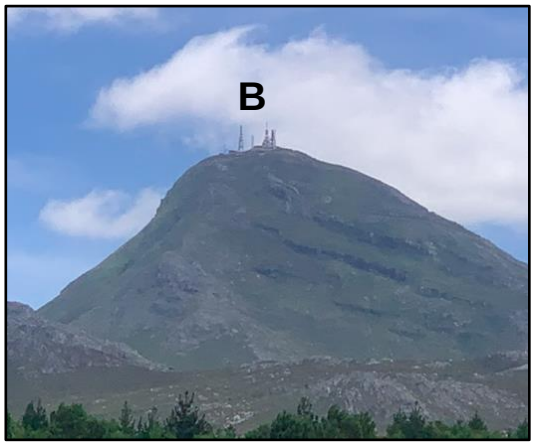
(b) The photograph is a … photo

high oblique	
low oblique	
vertical	
horizontal	x

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1.3 Refer to the photograph below, taken from Werda in D3, of Hans se Kop (B1 / B2).

Photograph 2



[Source: Examiner's photograph]

1.3.1 Determine the bearing from Werda (D3) to trig beacon 184 on Hans se Kop (B1 / B2).

330º (accept 327º to 333º) No º sign = 1 mark if in range.

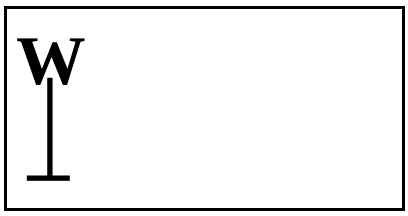
1.3.2 State the direction of trig beacon 184 from Werda.

NNW (no alternatives accepted)

1.3.3 Identify the man-made constructions indicated by B in the photograph.

Communication towers/ Cell towers/ Cell phone towers/ Satellite towers

1.3.4 Draw the symbol used on the topographical map for these man-made constructions.



1.3.5 Evaluate why Hans se Kop was the best site for constructing these.

Highest point, not blocked/ unobstructed so can serve the area well without interference.

1.3.6 Explain how GIS buffering could be used to determine the location of such constructions.

A zone could be drawn around the town to determine the area which the communication tower could serve.

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1.3.7 Is Hans se Kop visible from the N2 as you enter Grabouw (point C on the map, in block E3)?

Tick the correct answer:

Yes	x
No	

1.4 A group of mountain bikers set off from point A (D1) and travelled North on the other road up to Hans se Kop (B1 / B2).

1.4.1 Calculate the distance they travelled along the other road, from the split in the road at A, to the summit in B1 / B2.

8,3 km or 8 300 m (accept 8,05 km – 8,55 km= 8050m – 8550m)

Calculations: 16,6 cm × 0,5

1.4.2 Calculate the difference in height between these two points.

772 m (accept 762m – 782m)

Calculations: 1202 m – 430 m (accept 420m - 430m)

1.4.3 Calculate the average gradient of the cycle.

1:10,56 (accept 1:10- 1:11)

Calculations: G= H:D 772 m: 8300 m

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The cyclists noted that at the start of the ride, it was 6 ºC in Grabouw, and that they were surrounded by a thick blanket of mist.

Photograph 3



[Source: <https://www.bicycling.co.za/news-people/wow-rides-hans-se-kop-grabouw-trails/>]

1.4.4 The correct name for this mist is …

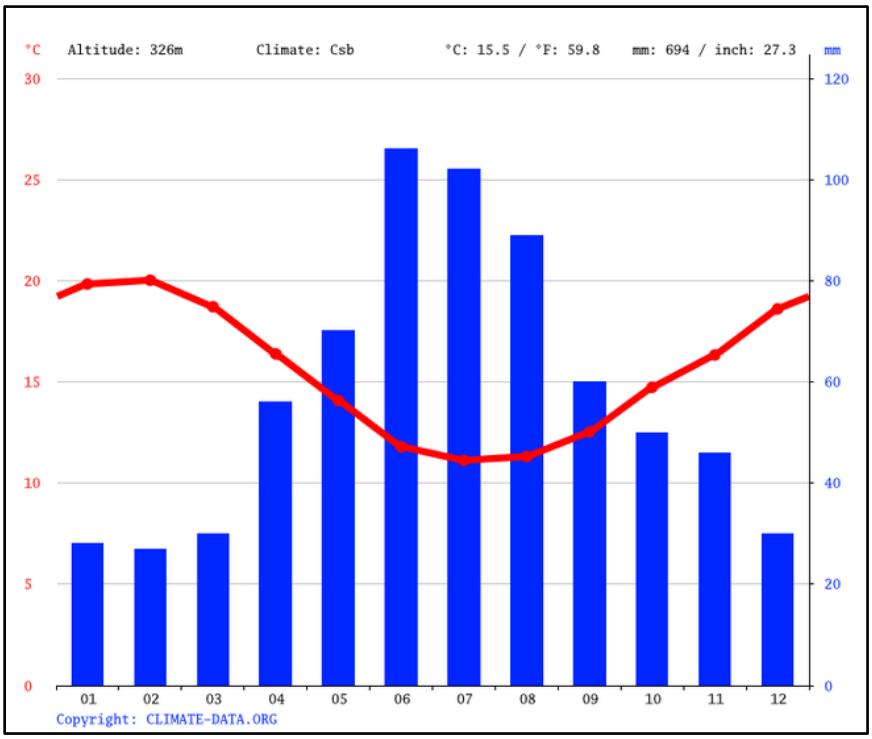
advection fog.	
frontal fog.	
coastal fog.	
radiation fog.	x

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QUESTION 2 CLIMATE, MAP SKILLS AND FLUVIAL GEOMORPHOLOGY

Refer to the graph to answer the questions below.

Figure 2: Climate Graph for Grabouw



[Source: <Climate-Data.org>]

2.1 2.1.1 The climate experienced at Grabouw is best described as:

Mediterranean	x
Desert	
Subtropical	

2.1.2 Rainfall in Grabouw is:

High	x
Low	

2.1.3 Annual temperatures are generally:

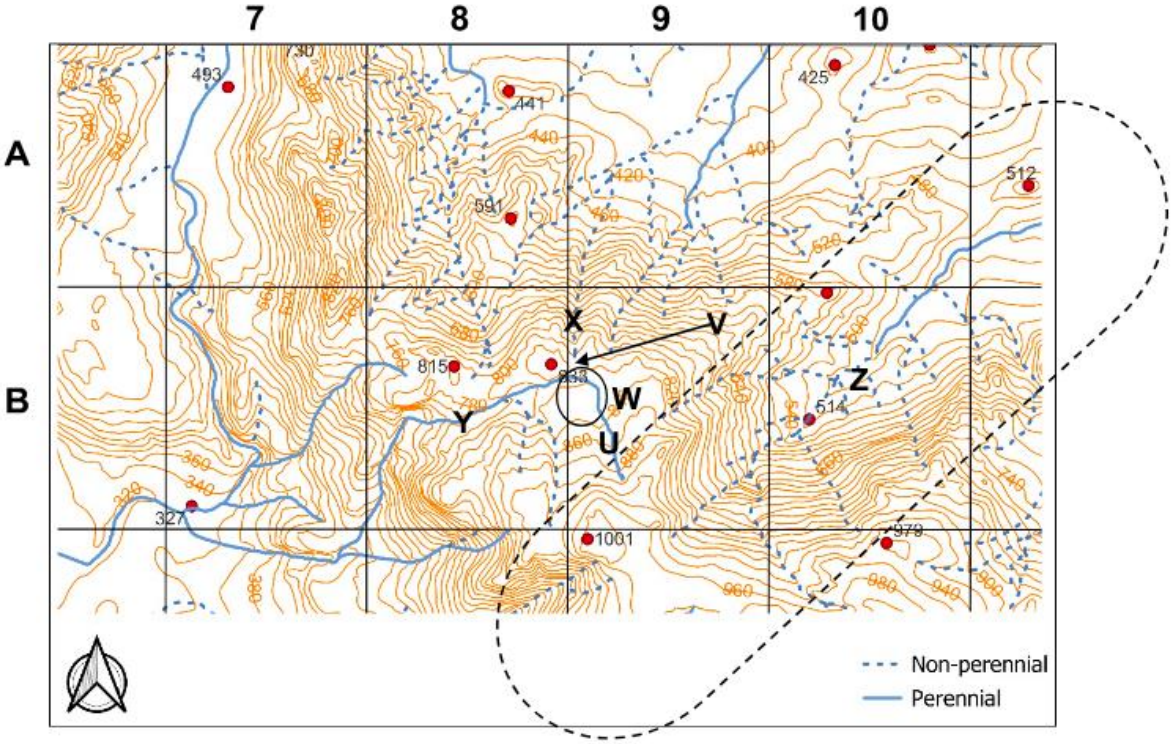
High	
Low	x

2.1.4 Provide map evidence to support that rainfall is *high / low* in this area.

High – There is evidence of plantations which require lots of rain / extensive area of land is being cultivated / high density of streams / marshes and vleis are evident which is proof that the water table is high / dams, e.g. Eikenhof to hold back water in times of floods.

2.2 Refer to the sketch map below, covering blocks A and B, 7 to 10 on the topographical map.

Figure 3: Sketch Map of the Rivers on Groenlandberg



River capture has occurred in the region surrounding spot height 833 in block B8. The river U used to flow into river X but was diverted by Y.

2.2.1 Fill in the table below, using the letters on the map and labels from the box to identify the features of river capture.

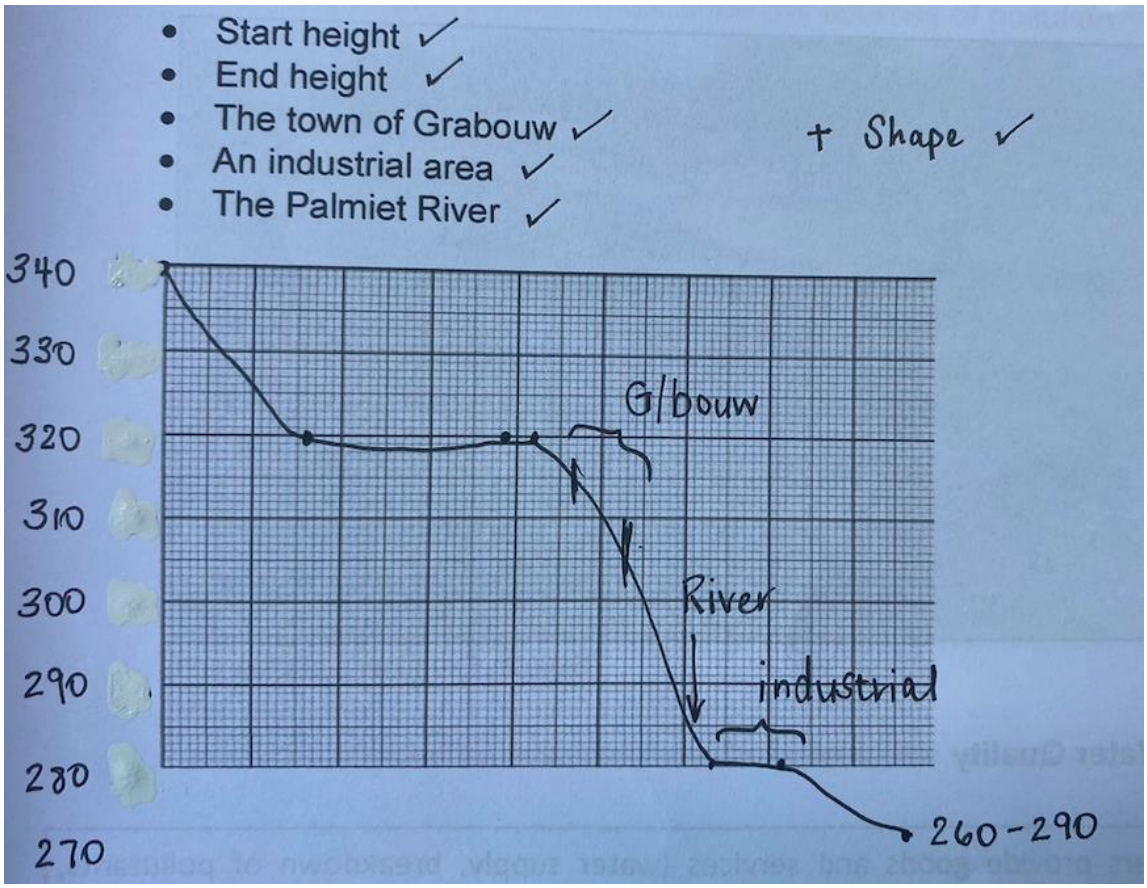
Captor stream Elbow of capture Captured stream Wind gap Misfit

U	**Captured stream**
V	**Wind gap**
W	**Elbow of capture**
X	**Misfit**
Y	**Captor stream**

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2.2.2 Using a dotted line, on the sketch map (Figure 3) fill in a watershed for the river system at Z. Include the non-perennial tributaries inside your watershed.

2.3 In the space below, draw a cross-section from Werda (D3) to Elgin railway station (E6). Use a vertical scale of 1 centimetre representing 10 metres. Label the following on your cross-section:



Mark allocation:

- Start height 340
- End height >260 < 290
- Grabouw in correct place (area)
- Industrial in correct place (area)
- River in correct place point
- Shape

2.4 The Palmiet River flows out of the Eikenhof Dam in C6, southwards through Grabouw through blocks D6, D5, and E5.

The photograph below was taken from a bridge on the R321 which crosses the Palmiet River on the outskirts of Grabouw (block E5 on the topographic map).

Photograph 4



[Source: Examiner's photograph]

Figure 4: Water Quality

Healthy rivers provide goods and services (water supply, breakdown of pollutants, conservation, flood control, natural products, recreation and a space for spiritual rituals) which contribute to human welfare and economic growth. When people use rivers, they impact on river health.		
River Health Categories		
Category	**Ecological Perspective**	**Management Perspective**
Natural	No or negligible modification	Relatively little human impact
Good	Biodiversity and integrity largely intact	Some human-related disturbance but ecosystems essentially in a good state
Fair	Sensitive species may be lost, with tolerant or opportunistic species dominating	Multiple disturbances with the need for socio-economic development
Poor	Mostly tolerant species; alien species invasion; disrupted population dynamics; species often diseased	High human densities or extensive resource exploitation

[Adapted from: <www.dws.gov.za>]

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2.4.1 Identify the type of flow of the river, evident in the photograph.

Laminar

2.4.2 The Palmiet River suffers from various different forms of pollution and is rated 'Poor' from the table above on river health. Use evidence from the photograph, and map evidence, to describe the sources of pollution.

Photographic evidence of pollution:	**Rubbish dumped evident on banks/ Litter/ Siltation**
Source of this pollution:	**Humans, town dwellers, people from town**
Map evidence of pollutant in E5:	**Industries/ Sewerage works/ Residential area**
Type of pollution this would cause from pollutant in E5:	**Possible effluent from factories / warm water from cooling machinery/ oil and run-off from town's impermeable surfaces**
Map evidence of pollutant in D6:	**Farms/ Diggings**
Type of pollution this would cause from pollutant in D6:	**Eutrophication / pesticide / herbicide / fertiliser effluent/ Silt/ Alien vegetation/ Fugitive dust**

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QUESTION 3 SETTLEMENT

Use the topographic map to answer the following questions.

3.1 Complete the sentences below by circling or underlining the correct word/ phrase.

3.1.1 Grabouw would be classified as a (***low-order service centre* / *minor country town* / *gap town***) on the urban hierarchy. (accept both)

3.1.2 The function of Grabouw is (***a central place* / *a trade and transport centre* / *specialised town***).

3.1.3 The shape of Grabouw most resembles a (***linear* / *circular* / *stellar***) shape.

3.1.4 The dominant street pattern in Pineview (E3) is (***planned irregular* / *radial* / *gridiron***).

3.1.5 Grabouw most closely follows (***the multiple nuclei model* / *concentric circle model* / *the apartheid city***).

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3.2 Refer to both the topographic map and the aerial photograph to answer the following questions.

3.2.1 Match the pictures below from the Property 24 website to the numbers given on the aerial photograph, and then identify which land use zone they belong to.

(a)



R680 000 Bond Costs ∨

3 Bedroom House for Sale in Grabouw

Affordable living in Pineview suburb

3 2 1 167 m² ∨

(b)



R2 200 000 Bond Costs ∨

3 Bedroom House for Sale in Grabouw Central

14 Mimosa Street, Grabouw Central, Grabouw

3 2 4 2 288 m² ∨

(c)



R2 850 000 Bond Costs ∨

Industrial Property for Sale in Grabouw

1 Pine Street, Grabouw

580 m²

(d)



R3 000 000 Bond Costs ∨

Vacant Land / Plot for Sale in Grabouw

Farm borders a residential suburb

5.76 ha ∨

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Property24 adverts	Location on the aerial photograph (1, 2, 3 or 4)	Land use zone (underline or circle your answer)
3.2.1 (a)	3	Rural-urban fringe / Light industrial / <u>High-density low-income residential</u> / Low-density high-income residential
3.2.1 (b)	4	Rural-urban fringe / Light industrial / High-density low-income residential / <u>Low-density high-income residential</u>
3.2.1 (c)	1	Rural-urban fringe / <u>Light industrial</u> / High-density low-income residential / Low-density high-income residential
3.2.1 (d)	2	<u>Rural-urban fringe</u> / Light industrial / High-density low-income residential / Low-density high-income residential

3.2.2 Calculate the area in metres squared covered by the square indicated around area 1 on the orthophoto.

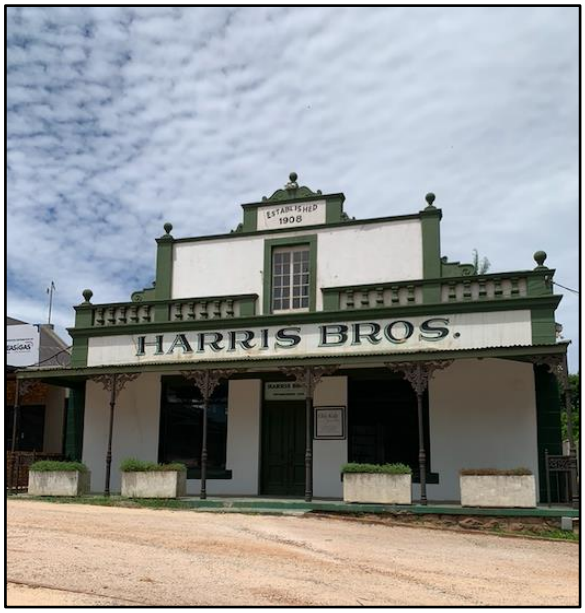
Answer: <u>37 800</u> m² (accept 34 000 - 41 800)

Calculations:
2 – 2,2cm × 100 = 200 – 220 m
1,7 – 1,9 cm × 100 = 170 – 190 m

*If they used 1:50 000 scale i.e. × 500 =
[850 000 – 1045 000 allow 1 method mark]

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3.3 Refer to the photographs before answering the questions that follow.

Photograph 5: The Restored Harris Bros. Building	**Photograph 6: An Abandoned Building in Town**
	

Photograph 7: Refuse Dumped on a Roadside	**Photograph 8: Informal Housing and a Portable Toilet**
	

[Examiner's photographs]

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3.3.1 Match the photographs 5 to 8 with the characteristics of urban decline below. Write the image number (5, 6, 7 or 8) next to the correct characteristic.

Characteristics of urban decline:	Image number:
Areas of low-quality housing with unsanitary conditions.	8
Empty or derelict properties. Businesses and shops close as threshold populations are not maintained.	6
Reduction in basic service provision. The physical environment suffers with unsightly, overgrown and unmaintained areas.	7

3.3.2 (a) Explain why the Harris Bros. building (photograph 5) is an example of *façadism*?

Building maintained its original structure on the outside but modernised inside.

Building upgraded and maintained its original glory.

(b) How can urban regeneration happen in Grabouw? You can use the Harris Bros. or your own knowledge to answer this question.

Attract people back to the area, either through niche markets or provision of services
If repeated facadism from above, max 1/2

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3.4 Read the source below.

Plan to create a self-sustaining Khoisan community in Grabouw

- First occupied in November 2020, Knoflokskraal near Grabouw is home to thousands of people.
- Households at Knoflokskraal have large plots and are spread across 1 800 hectares. Most of the brightly-coloured homes are informal structures made of wood, zinc sheets and other material. There is no electricity or running water.
- The entrance to one area within the settlement has a sign that reads: 'Khoi-munity'.
- Their aim is not to create an informal settlement but to build a community in which people uplift one another. Many residents of Knoflokskraal come from areas on the Cape Flats where gangsterism, shootings, and drug use are rife.
- We want to get people here to teach them to farm and look after the land themselves, so we are not dependent on the state. We want them to know that the Khoisan people know where they come from.
- The homes at Knoflokskraal are spread across three farms owned by the Department of Public Works (DPW), and managed by the Department of Forestry, Fisheries and the Environment (DFFE).
- The department is heading to the High Court to obtain an order to evict the occupiers.

[Source: Adapted from <https://groundup.org.za/article/grabouw-occupiers-want-to-create-soverign-khoisan-community/>]

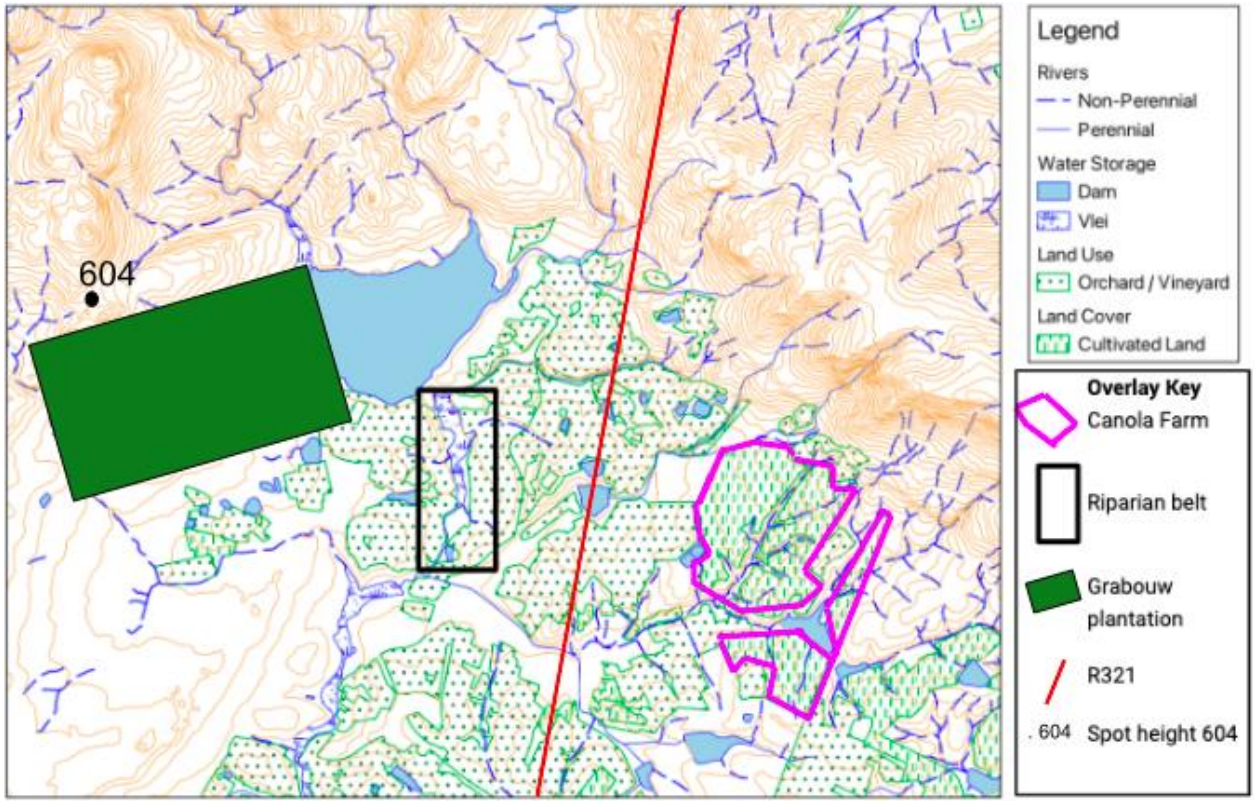
In the blocks below, outline TWO possible benefits of a sovereign Khoisan community, and TWO possible negative effects if this were to continue.

Decision making: Sovereign Khoisan Community	
Benefits:	**Negatives:**
Maintaining cultural identity. Escape social ills such as gangs and drugs. Make people self-sufficient. **ANY 2**	Illegally occupied land. Land is meant for preservation of the environment. Only supports one group to the exclusion of others. *If they read ‘this’ as evictions, may say Evictions are against human rights/ Evictions make people lose homes and income and safety **ANY 2**
*Credit must be given for quoting correct benefits/ negatives from the fact file.	

QUESTION 4 ECONOMIC GEOGRAPHY AND GIS

The sketch map below will be used for the questions that follow. The map shows Eikenhof Dam (C5 and C6 on the topographic map) and surrounds.

Figure 4: Sketch Map



4.1 Farming evident on the sketch map is …

market gardening.	
commercial extensive farming.	x
commercial intensive farming.	
subsistence farming.	

4.2 4.2.1 On the sketch map (Figure 4 above), fill in the overlay key and draw in the following in their correct places:

(a) Grabouw plantation

(b) The R321

(c) Spot height 604 (C3 on the topographic map)

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4.2.2 Complete the table below and determine the type of vector layer data representation for the items from the overlay key. Circle or underline the correct answer:

Canola farm	**Point**	**Line**	**<u>Polygon</u>**	**Buffer**
Riparian belt	**Point**	**Line**	**<u>Polygon</u>**	**<u>Buffer</u>**
R321	**Point**	**<u>Line</u>**	**Polygon**	**Buffer**
Spot height 604	**<u>Point</u>**	**Line**	**Polygon**	**Buffer**

4.3 Grabouw has experienced a high population growth rate in recent years.

4.3.1 What is the term to describe this process?

Accept counter urbanism/ urban growth or rural-to-urban migration.

4.3.2 Identify TWO factors, evident from the map, why economically active people would be drawn to Grabouw.

Seasonal labour on farms / employment opportunities in towns / work in the tourism sector in nature reserves/ employment in factories/ close to transport links to Cape Town.

4.3.3 Explore evidence of whether Grabouw provides enough services for a growing population.

No – no secondary education evident, informal settlements alluded to shows lack of housing and basic sanitation.
Yes – number of schools, post office, police station all evident.

- **The mark for Yes/ No, depends on the qualifier.**

4.3.4 Explain how you could use data querying to obtain information about population statistics and the number of services in Grabouw.

Data querying – obtain populations statistics (attributes) and compare to available services.
Must show or imply comparison/ correlation/ decision making.

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4.4 Read the article below.

The Festival of Yellow, celebrating the canola fields

Last updated: Monday, 14 August 2023

CapeTownMagazine.com Festival of Yellow, now in its third consecutive year, celebrates canola season, the blooming fields of gold that cover the province from July to September.

They are such a moment of joy in the Western Cape, that we decided to start an annual celebration in 2021.

And to tell you why these fields are a Western Cape success story. How was the industry born? Southern Oil, an oil extraction plant in Swellendam, introduced canola crops to farmers in 1993 with just 400 hectares. Today it is an industry of 94 307 hectares, working with over 500 local canola producers, and employing thousands across the Western Cape – this is a story every South African can be proud of.

The canola fields bloom from July to the end of September. It's weather dependent, so if it's warmer and drier, the canola will go into bloom earlier and for a shorter period of time. The longer the canolas bloom, the better the yield. So, if you're still seeing canolas bloom late September, then know it's a good canola year.

[Source: <https://kaapstadmagazine.nl/events/the-festival-of-yellow-celebrating-the-canola-fields/>]

Complete the table below using the topographic map, the climate graph (page 8, Figure 2), and the article on the Festival of Yellow.

Transport links around Grabouw for Festival of Yellow:	**1. N2**	**2. R321 or Elgin railway**
Benefits to Grabouw of the Festival of Yellow:	**1. Tourism and revenue/ Accommodation**	**2. Employment/ Publicity/ Puts Grabouw on the map**
Season to visit the fields in bloom:	**Winter**	
Temperatures required for the flowers to bloom:	**Cool, around 15 °C (10 °C – 15 °C)**	
Annual rainfall needed:	**694 mm**	

Total: 100 marks

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