

Assessment Schedule – 2014

Geography: Apply geography concepts and skills to demonstrate understanding of a given environment (91243)

Evidence Statement

Question One				Expected Coverage		
The Environment of Central Hawke’s Bay				Achievement	Achievement with Merit	Achievement with Excellence
Not Achieved	N0	No response; no relevant evidence	(a)	<p>Evidence of understanding (U) includes:</p> <p>Describes the general location of Central Hawke’s Bay (CHB).</p> <p>Includes generalised evidence from Resources A and B.</p>	<p>Evidence of in-depth understanding (D) includes:</p> <p>Describes, with a high level of accuracy, the location of Central Hawke’s Bay (CHB).</p> <p>Includes specific evidence from Resources A and B.</p>	<p>Evidence of comprehensive understanding (C) includes:</p>
	N1	2 of 9 at Achievement level				
	N2	3 of 9 at Achievement level				
Achievement	A3	4 of 9 at Achievement level	(c)	<p>Names THREE main types of economic activities in CHB:</p> <p>(1) Agriculture (2) Horticulture (3) Viticulture.</p> <p>Gives the general trend of population growth for SH2 compared to SH50:</p> <ul style="list-style-type: none"> • SH2 settlements are increasing • SH50 settlements are decreasing. 	<p>Gives the general trend of population growth for SH2 compared to SH50:</p> <ul style="list-style-type: none"> • SH2 settlements are increasing • SH50 settlements are decreasing. <p>Includes specific evidence from Resource C.</p>	
	A4	5 of 9 at Achievement level				

Merit	M5	3 of 7 at Merit level	(e)	<p>Gives the type of vegetation marked Z in Resource F:</p> <ul style="list-style-type: none"> • Exotic forest. 		
	M6	4 of 7 at Merit level	(f)	<p>Locates and labels each of the following on the précis map, using conventions: Tukituki River</p> <p>(i) Irrigated crop circle (ii) Railway. (See Appendix A).</p>	<p>Locates and labels each of the following on the précis map, using a high level of accuracy AND conventions:</p> <p>(i) Tukituki River (ii) Irrigated crop circle (iii) Railway. (See Appendix A).</p>	
Excellence	E7	(g) at Excellence level, plus 3 other parts at Merit level				
	E8	(g) at Excellence level, plus 4 other parts at Merit level	(g)	<p>Explains how ONE characteristic (natural OR cultural) of the environment makes CHB suitable for settlement and farming activities. Includes generalised evidence from Resources A–F. (See Appendix B).</p>	<p>Explains, in detail, how ONE characteristic (natural OR cultural) of the environment makes CHB suitable for settlement and farming activities. Includes specific evidence from Resources A–F. (See Appendix B).</p>	<p>Fully explains how ONE characteristic (natural OR cultural) of the environment makes CHB suitable for settlement and farming activities. Covers a range of points incorporating the geographic concept of environments and using geographic terminology. Integrates specific evidence from Resources A–F throughout. Answer shows insight. (See Appendix B).</p>

Question Two			Expected Coverage			
Change to the Central Hawke's Bay Environment			Achievement	Achievement with Merit	Achievement with Excellence	
Not Achieved	N0	No response; no relevant evidence	(a)	<p>Evidence of understanding (U) includes:</p> <p>Explains TWO impacts drought has had on the CHB region from any of the following:</p> <ul style="list-style-type: none"> • Farmers spent more money • Lamb prices dropped • Size and numbers of fish decreased • Viticulture experienced a good year. <p>Includes generalised evidence from Resource G.</p>	<p>Evidence of in-depth understanding (D) includes:</p> <p>Explains, in detail, THREE impacts drought has had on the CHB region from any of the following:</p> <ul style="list-style-type: none"> • Farmers spent \$2000 per day on feed • Lamb prices dropped by 50 % • Size and numbers of fish such as Whitebait decreased • Viticulture experienced best year since 1998. <p>Includes specific evidence from Resource G.</p>	<p>Evidence of comprehensive understanding (C) includes:</p>
	N1	ONE or more parts attempted, but insufficiently correct				
	N2	1 of 4 at Achievement level				
Achievement	A3	2 of 4 at Achievement level	(b)	<p>Gives the name of the river that would be dammed to create the RWSS reservoir lake:</p> <ul style="list-style-type: none"> • Makaroro River 		
	A4	3 of 4 at Achievement level	(c)	<p>Constructs a bar graph to show the change in fertiliser use <i>if</i> the RWSS goes ahead, using conventions to present the data.</p> <p>Conventions include (allowing for minor errors):</p> <ol style="list-style-type: none"> (1) Title (2) Axes have even scales (3) Axes correctly labelled (4) Plotting data (5) Bars identified. <p>(See Appendix C).</p>	<p>Constructs a positive / negative bar graph to show the change in fertiliser use <i>if</i> the RWSS goes ahead, using a high level of accuracy AND conventions to present the data.</p> <p>A high level of accuracy includes (allowing for minor errors):</p> <ol style="list-style-type: none"> (1) Detailed title (2) Detailed axes labels (3) Plotting of data. <p>(See Appendix C).</p>	
Merit	M5	2 of 3 at Merit level				
	M6	2 of 3 at Merit level, plus 1 other at Achievement level				

Excellence	E7	(d) at Excellence level AND 1 at Merit level	(d)	<p>Explains how the RWSS would bring about change to ONE aspect of the CHB environment.</p> <p>Includes generalised evidence from Resources G–J. (See Appendix D).</p>	<p>Explains, in detail, how the RWSS would bring about change to ONE aspect of the CHB environment.</p> <p>Includes specific evidence from Resources G–J. (See Appendix D).</p>	<p>Fully explains how the RWSS would bring about change to ONE aspect of the CHB environment.</p> <p>Covers a range of points incorporating the geographic concept of change and using geographic terminology.</p> <p>Integrates specific evidence from Resources G–J throughout. Shows insight. (See Appendix D).</p>
	E8	(d) at Excellence level AND 2 at Merit level				

Question Three			Expected Coverage			
Sustainability of the Central Hawke’s Bay Environment			Achievement	Achievement with Merit	Achievement with Excellence	
Not Achieved	N0	No response; no relevant evidence	(a)	<p><u>Evidence of understanding (U) includes:</u></p> <p>Annotates the photograph with detailed labels to explain TWO measures to minimise the impact of livestock on waterways, eg:</p> <ul style="list-style-type: none"> • Manage soil to avoid compaction. • Fence off waterways to keep stock out of stream. • Planting trees / shrubs on banks to stabilise stream banks. • Bridges across waterways to keep stock out of stream. 	<p><u>Evidence of in-depth understanding (D) includes:</u></p> <p>Annotates the photograph with detailed labels to explain, in detail, TWO measures to minimise the impact of livestock on waterways, eg:</p> <ul style="list-style-type: none"> • Rivers, eg waterways are fenced off as part of the government’s riparian scheme to prevent pollution of the waterway by cow manure. • Trees, eg willow and shrubs such as flax are planted on the banks to maintain the stability and prevent soil erosion. • Bridges are built across waterways to stop the pugging by cows as they cross the river. 	<p><u>Evidence of comprehensive understanding (C) includes:</u></p>
	N1	ONE or more parts attempted, but insufficiently correct				
	N2	1 of 3 at Achievement level				
Achievement	A3	2 of 3 at Achievement level				
	A4	ALL 3 at Achievement level				
Merit	M5	2 of 3 at Merit level	(b)	<p>Explains THREE advantages / disadvantages to the natural AND cultural environments.</p>	<p>Explains, in detail, THREE advantages / disadvantages to the natural AND cultural environments.</p>	
	M6	ALL 3 at Merit level				

Excellence	E7	(c) at Excellence level, plus (a) OR (b) at Merit level	(c)	<p>Explains how sustainable the RWSS could be for the CHB environment. Includes generalised evidence from the resources. (See Appendix E).</p>	<p>Explains, in detail, how sustainable the RWSS could be for the CHB environment. Includes detailed supporting evidence from the resources. (See Appendix E).</p>	<p>Fully explains how sustainable the RWSS could be for the CHB environment. Covers a range of points incorporating the geographic concept of sustainability and using geographic terminology. Integrates detailed specific supporting evidence from the resources throughout. Shows insight. (See Appendix E).</p>
	E8	(c) at Excellence level, plus (a) AND (b) at Merit level				

Cut Scores

	Not Achieved	Achievement	Achievement with Merit	Achievement with Excellence
Score range	0 – 8	9 – 13	14 – 18	19 – 24
Codes				
U	=	Understanding		
D	=	Detailed understanding		
C	=	Comprehensive understanding		
S	=	Specific evidence		

Appendix A – Question One (f)

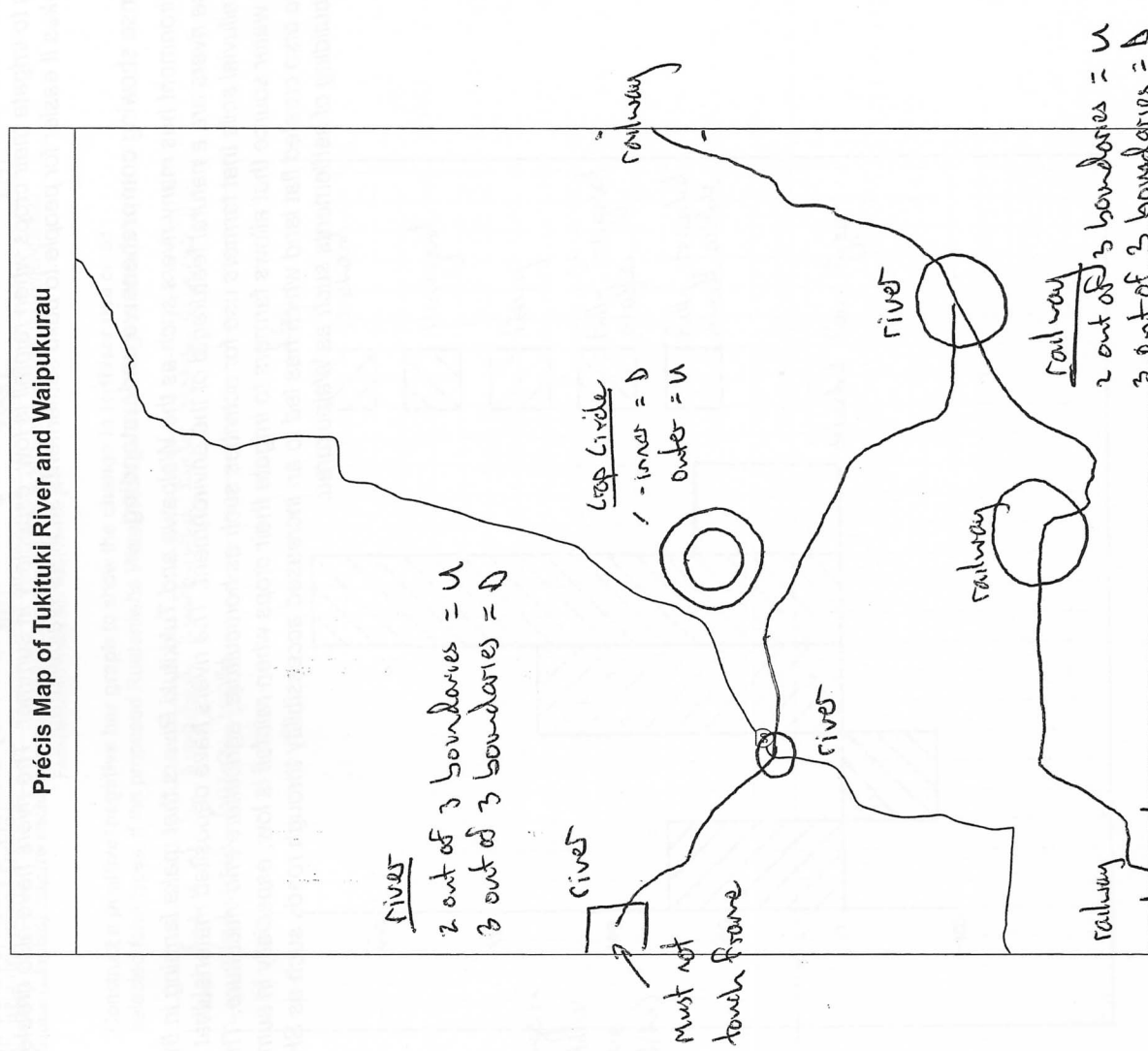
Précis Map

Refer to Resources E and F on pages 5–7 of the resource booklet when answering (f).

Note: A frame has been drawn on Resource F to indicate the précis map area for this question.

(f) On the précis map below:

- (i) Locate and label the Tukituki River from GR 880580 to the SH2 bridge at GR 904567
- (ii) Locate and label the irrigated crop circle marked X in Resource E
- (iii) Locate and label the railway.



Key:

	Tukituki River
	Irrigated crop circle
	Railway

Appendix B – Question One (g)

Concept of Environments

Level of response showing **understanding**:

“The CHB environment has many rivers that make farming in the area possible. These rivers have created fertile soils that farmers use to grow their crops. They also are a water source that allow farmers to irrigate their crops when rainfall is low, and to build settlements to use for their needs”.

Level of response showing **in-depth understanding**:

“The CHB environment has many rivers such as the Waipawa River that make farming in the area possible. These rivers have created fertile soils that farmers use to grow their crops. They also are a water source that allows farmers to irrigate their crops when rainfall is low, especially in summer. The rivers have also created flat land, which makes it easier for people to build settlements such as Waipukurau.”

Level of response showing **comprehensive understanding**:

“The CHB environment has many rivers such as the Waipawa and Tukituki Rivers that make farming in the area possible. These rivers are a natural feature of the environment. The rivers have deposited material creating fertile alluvial soils that farmers can use for activities such as horticulture, agriculture, and viticulture. They also provide a water source that allows farmers to irrigate their crops when rainfall is low, especially in summer. The rivers have also created flat land, which has led to an increased accessibility through roads such as SH2, leading to the building of settlements such as Waipukurau.

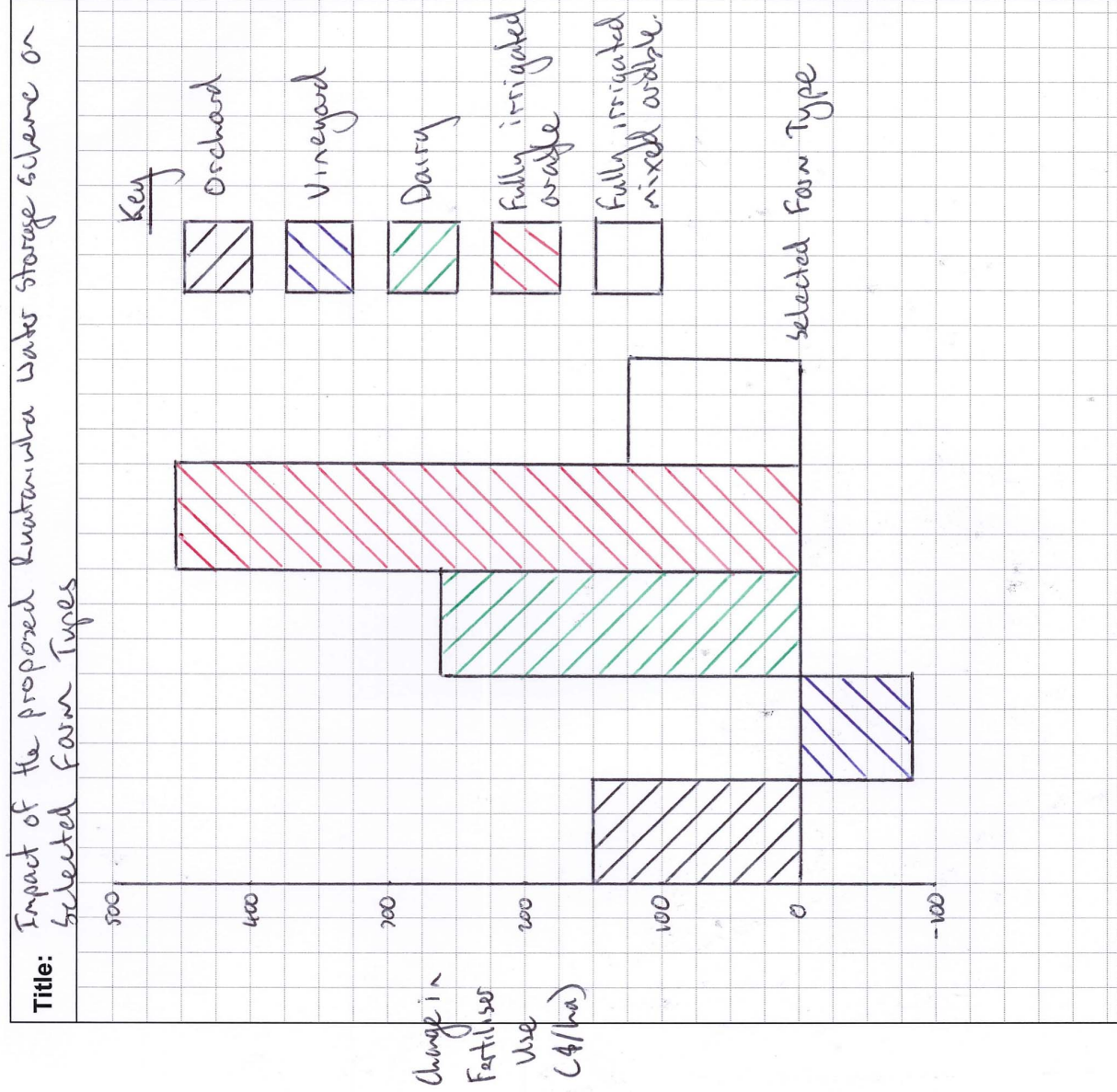
Appendix C – Question Two (c)
Positive / negative bar graph

Refer to the table below when answering (c).

Impact of the Proposed Ruataniwha Water Storage Scheme on Selected Farm Types				
Farm type	Change in Profit (\$ per ha)	Change in Water Required (tonnes per ha)	Change in Fertiliser Use (\$/ha)	
Orchard	10 023	1 500	150	
Vineyard	4 383	-10	-83	
Dairy	3 332	3 360	260	
Fully irrigated arable	1 480	2 492	457	
Fully irrigated mixed arable	102	2 988	125	

Source (adapted): <http://www.hbrc.govt.nz/HBRC-Documents/HBRC%20Document%20Library/RWSS%20FactsheetandFinancials%20FINAL.pdf>

- (c) Construct a **positive / negative bar graph** to show the **change in fertiliser use** on all selected farm types, if the proposed Ruataniwha Water Storage Scheme goes ahead.



Appendix D – Question Two (d)

Concept of Change

Level of response showing **understanding**:

“The RWSS will change the economy of the CHB environment. Firstly, the cost of the scheme is very high and will have to be paid for by ratepayers. However, it will create jobs in the region because farming will increase and this could stimulate the economy. Farmers will no longer have to face the costs of drought because their water supply will be more secure”.

Level of response showing **in-depth understanding**:

“The RWSS will change the economy of the CHB environment. Firstly, the cost of the scheme is \$232 million, which is very high and will have to be paid for by ratepayers. However, it will create 2 250 jobs in the region because dairy farming will increase, and this could boost the economy by \$235 million a year. Farmers will no longer have to face the costs of drought, such as when lamb prices fell by 50 % in 2013, because their water supply will be more secure”.

Level of response showing **comprehensive understanding**:

“The RWSS will change the cultural environment of CHB as the economy will be affected. A negative change is the cost of the scheme (\$232 million), which will have to be paid for by ratepayers. There are predictable positive changes however. The RWSS will create 2 250 jobs in the region because dairy farming will increase, and this could create further change by stimulating the economy, boosting it by \$235 million a year. Farmers will no longer have to face the costs of drought, such as when lamb prices fell by 50 % in 2013, because their water supply will be more secure”.

Appendix E – Question Three (c)

Concepts of Sustainability and Kaitiakitanga

Level of response showing **understanding**:

“The RWSS will be very sustainable for the environment. The effects of drought will be less because the farmers will have greater access to water and therefore the CHB economy will not suffer during these times. With more jobs created, new families will come into the area and new facilities will be built, which will grow the settlements in the area. Some negative effects to the rivers due to increased farming may occur, but if farmers are aware of this, they may be able to stop it happening”.

Level of response showing **in-depth understanding**:

“The RWSS will be very sustainable for the environment. The effects of drought will be less because the farmers will have greater access to water and therefore the CHB economy will not suffer during these times. With 2 250 jobs created, new families will come into the area increasing school rolls, and this growth will mean more libraries, sports centres, and swimming pools being built in the area. Some negative effects to the rivers due to increased farming may occur, but if farmers are aware of this they may be able to show kaitiakitanga for the land to stop it happening”.

Level of response showing **comprehensive understanding**:

“The RWSS will be very sustainable for the CHB environment. Farmers will have certainty of supply in terms of water and therefore the CHB economy will not suffer during times of drought. It is estimated that orchards will have a \$10 023 increase in profit per hectare, which bodes well for the future generations in the area. With 2 250 jobs created, new families will come into the area increasing school rolls, and this growth will mean more libraries, sports centres, and swimming pools being built in the area to meet the needs of the community. Some negative effects to the Tukituki River may occur due to increased nitrates entering it, but farmers will be able to manage this by creating riparian zones to prevent, or at least minimise these impacts”.