

Cultivation setbacks from waterways in Gisborne:

HortNZ Guidance for vegetable and cropping growers

Version 1.0 (July 2021)

This document sets out erosion management and cultivation setback requirements on vegetable growing and cropping land in Gisborne, and how to manage these through your Farm Environment Plan.

In Gisborne, the Tairāwhiti Resource Management Plan¹ (TRMP) has rules that govern the sustainable management of natural and physical resources in the district, so that further degradation is prevented.

1 The Tairāwhiti Resource Management Plan

Rule 6.2.9(3) relates to discharges from vegetable and cropping land. There are two parts to this rule. Part (a) relates to Farm Environment Plans and part (b) to cultivation setbacks from waterways.

1.1 Farm Environment Plans

Part (a) of the rule requires that all commercial vegetable and cropping land greater than 1 hectare is managed using a Farm Environment Plan (FEP) that meets the requirements of TRMP Appendix H20². FEPs need to be submitted to Council, or NZGAP if you are using the Environment Management System (EMS) add-on, by 1 May 2021. As part of the FEP development process **you need to identify and map waterbodies / drains** in and around your properties.

Council have formally recognised the EMS add-on as a pathway for GAP certified growers to meet Appendix H20. Growers may alternatively choose to use the Council process and FEP template.

1.2 Cultivation setbacks to waterways

Part (b) of the rule states that from 1 July 2021 **no cultivation is undertaken within 5 metres of the edge of any modified watercourse, permanent or intermittent stream, except** where the FEP can demonstrate that a smaller setback of at least 1 metre can occur without adversely impacting on the quality of the receiving waterbody and this is certified by the Consent Authority.

Growers can use the EMS audit *or* the Council sign-off process to meet this part of the rule. Growers using the EMS will be guided by industry environmental Codes of Practice and Guidelines, including this guidance document, when developing an FEP and cultivation setback / headland management plan.

¹ <https://www.gdc.govt.nz/council/tairawhiti-plan/tairawhiti-plan>

² https://www.gdc.govt.nz/_data/assets/pdf_file/0018/8541/H20-Appendix-Requirements-of-Farm-Environment-Plans.pdf

1.3 Definitions of waterways in part (b) of the rule

Part (b) waterway terms are *modified watercourse* and *permanent or intermittent stream*. Some of these terms have been defined in the TRMP, see below.

A modified watercourse is a water course that:

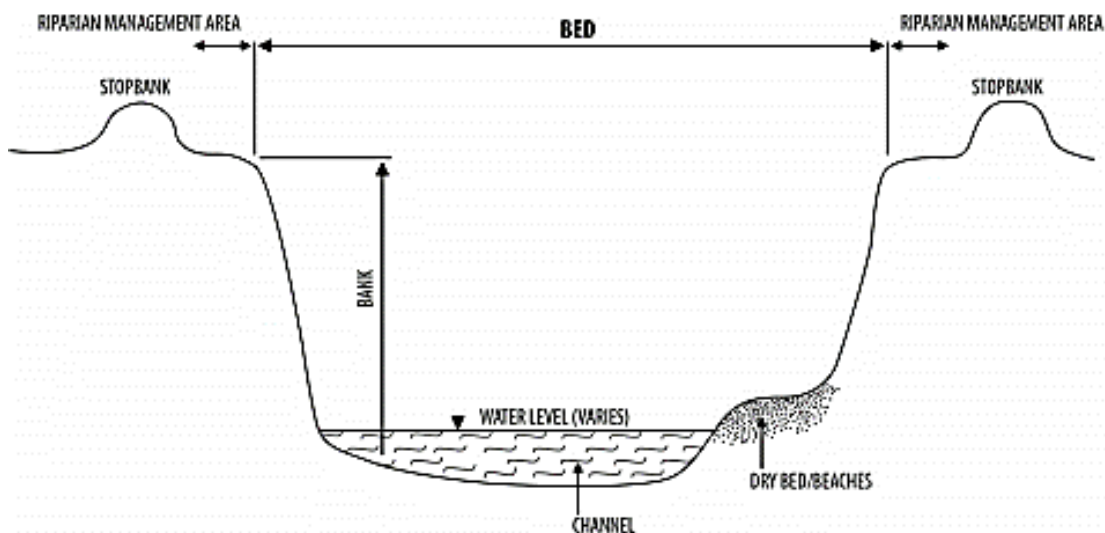
1. Is a river or stream that has been channelled or diverted; or
2. Is or was constructed through a wetland or swamp, that generally follows the path of a historic natural watercourse or reasonably defined natural drainage channel; or
3. Is a watercourse that has a natural headwater of either a channel or spring, and generally follows the path of a historic natural watercourse or reasonably defined natural channel; or
4. Is the oxbow of a diverted river.

An Intermittent stream is a stream that flows seasonally when the water table is high, such as during and after periods of heavy or steady rain. An intermittent stream has:

- a defined water channel and banks; and
- connects with a permanently flowing surface water body; and
- provides habitat for aquatic flora and/or fauna species.

If you are unsure whether these definitions apply to the waterbodies on or around your property and cultivation activities, please consult with Gisborne District Council directly (fep@gdc.govt.nz).

The setback measurement is from the edge of the waterbody, which is at the point where the slope starts going down. Shown below as the line between the Bed and Riparian Management Area.



2 Horticulture industry guidelines and standards

Industry has developed environmental Codes of Practice and guidelines (see Section 4) based on research and trials to appropriately manage environmental risks on commercial horticulture land.

Growers using the EMS have access to a toolbox of measures to manage environmental risks identified on farm through their FEP. Mitigation options to meet part (b) of the rule can be found in Section 6.

It is important that growers prioritise setbacks / alternative mitigations on modified watercourse and permanent and intermittent streams *first* to meet the Council rule by 1 July 2021 or before next cultivation. The next step is to plan and implement mitigation measures on other watercourses / drains on and around your properties as part of the EMS risk assessment process over time (e.g., 0-5 years). See the table of tasks below and new Template 6H on last page of this document.

3 Summary Checklist for Growers

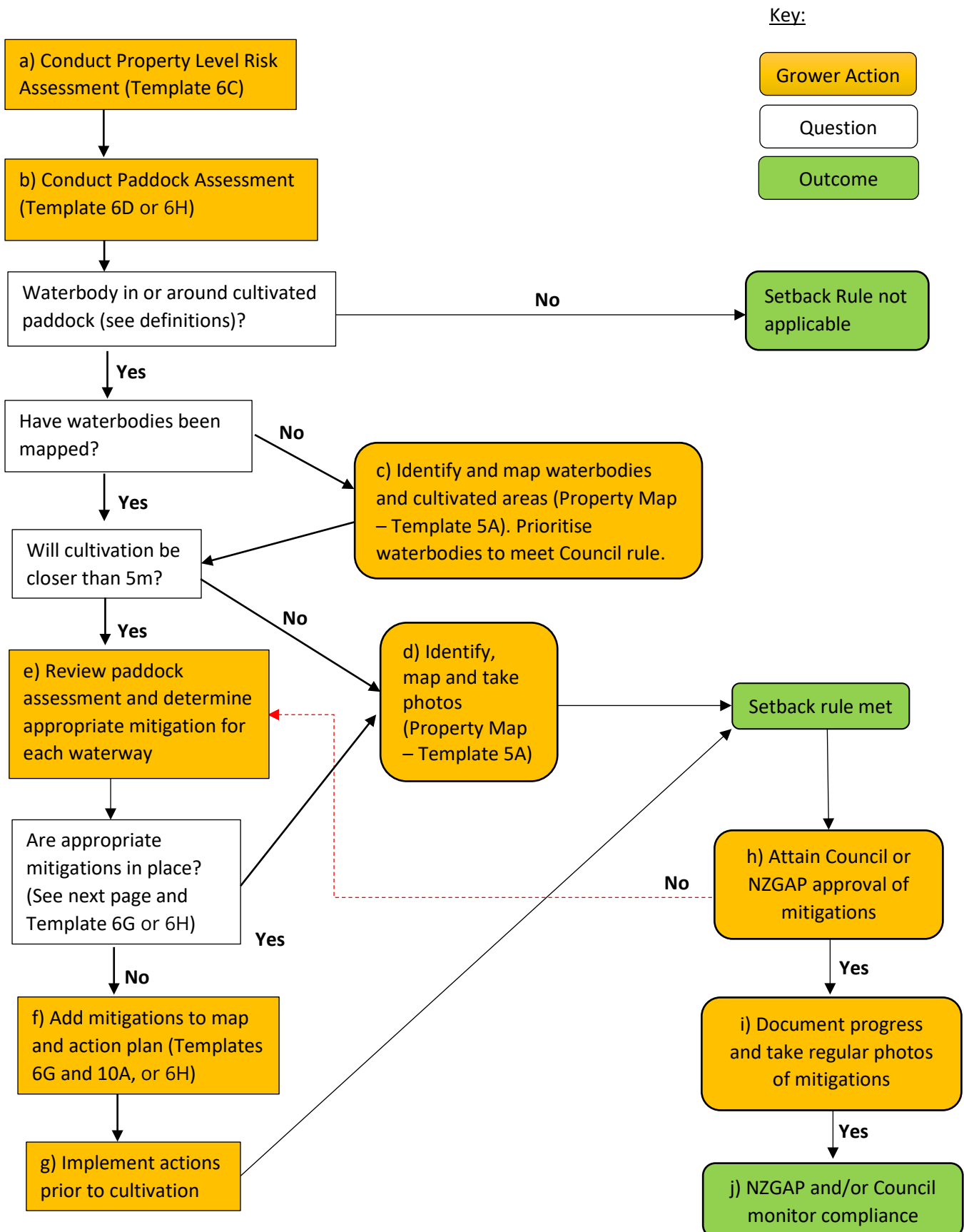
No.	Task	Complete? (Yes, Partial, No, N/A)	Comment
a)	Conduct property level risk assessment of erosion and sediment loss (Template 6C - <i>ref. EMS FEP template</i>)		
b)	Conduct paddock level risk assessment of erosion and sediment loss (Template 6D or 6H)		
c)	Identify and map waterbodies / drains and cultivated areas (prioritise modified watercourses and permanent and intermittent streams to meet Council rule)		
d)	If 5m setback or mitigations already in place, identify and add to map and action plan (Templates 6G and 10A, or 6H)		
e)	If 5m setback is not appropriate, determine alternative Sediment Control Mitigations (Template 6G or 6H) (see options in Section 6 of this document)		
f)	Develop the Action Plan (Template 10A or 6H) for adoption of alternative mitigations		
g)	Implement actions to meet Council rule before next cultivation (Template 10A or 6H)		
h)	Attain NZGAP or Council approval of mitigations and plan		
i)	Document progress and take regular photos of mitigations		
j)	NZGAP and/or Council monitor compliance		

4 Relevant Documents (visit NZGAP website³)

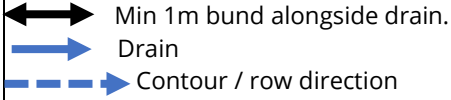
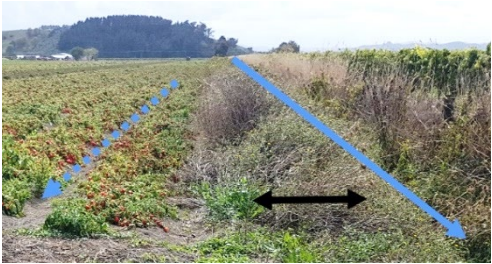


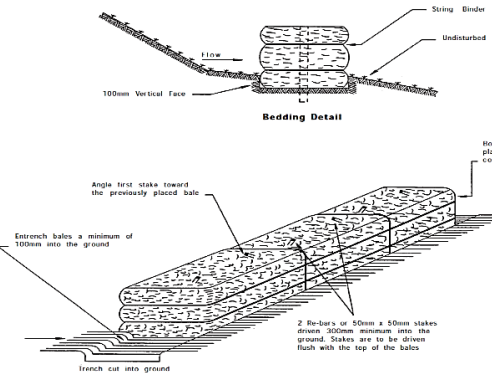
1. Erosion & Sediment Control Guidelines for Vegetable Production
2. HortNZ Code of Practice for Nutrient Management
3. Vegetated Buffer Strips – Guidance for Achieving Good Practice (at the publishers)
4. NZGAP Environment Management System (EMS) add-on Templates

³ [Link to NZGAP Environment Management System \(EMS\) add-on webpage](#)

5 Decision tree for setbacks



6 Sediment Control Mitigation Options

Scenario	Option	Detail	Example
Council default requirements			
Default	5m Setback	No cultivation is undertaken within 5 metres of a modified watercourse or intermittent/permanent stream. Good practice is for setback to be vegetated and undisturbed (i.e. not driven on).	
Industry good practice options, and alternatives to default 5m setback as appropriate			
Alternative where water flows parallel to waterbody (typically where a drain runs parallel to crop rows)	Bund at least 1m wide	Where the contour prevents overland flow from passing across a strip and into a waterway. A bund can be formed to ensure water does not flow from the paddock into the waterway. 	
Alternatives where water flows into the waterbody (typically at the end of crop rows)	Vegetated Buffer Strips at least 4m wide and NOT driven on, i.e., this is not part of the headland	Ensure that channelisation is minimised through the strip or that overland flow does not find a path around the buffer. See: <i>Vegetated Buffer Strips – Guidance for Achieving Good Practice</i> for further details (e.g., placement, ground preparation, width, and slope).	
	Permanent Decanting Earth Bund (DEB)	Located a minimum of 1m from the waterway or paddock boundary, with a <u>permanent</u> decanting device (e.g., perforated pipe). See: <i>Erosion & Sediment Control Guidelines for Vegetable Production</i> for further details (e.g., snorkel hole dimension and number to achieve the required decant rate of 3 L/s/ha).	
	Temporary Decanting Earth Bund (DEB)	For summer crops and winter pasture where the slope is less than 2°. The bund is located a minimum of 1m from the waterway or paddock boundary, with a <u>temporary</u> decanting device in summer (e.g., silt fence, socks, or hay bales) which can be removed to prevent ponding in winter <u>after</u> the pasture is fully established. The decant must be reinstated <u>prior</u> to the pasture being removed and the ground cultivated in spring.	

6H. SOIL: Integrated Risk Assessment and Management Plan to Minimise Sediment Loss into Waterbodies and Drains

No.	Paddock/Block info				Water Risk Assessment				Headland Management Plan				
	Annual Assessment Date	Paddock/Block name (See map for Legal Title)	Cultivated? (Yes/No)	Slope	Drain or waterbody present?	Direction of water flow to drain or waterbody	Current soil loss mitigations	Risk rating	Recommended actions to minimise soil loss and meet setback rule	Due date	Justification	Maps updated	Setback rule met?
1	01/07/2021	Paddock 1	Yes	Low (0-1%)	Yes	Direct into	5m vegetated setback	Low	Ensure setback is not driven on during field operations	01/07/2021	Protecting setback from damage by machinery tracks	Yes	Yes
2	01/07/2021	Paddock 1	"	"	Yes	Parallel to	None	Low	Establish 1m grass bund before next cultivation	30/09/2021	Drain runs parallel to crop rows so risk is low. Bund has been effective in other similar paddocks	Yes	Yes
3	01/07/2021	Paddock 1	"	"	Yes	Away from	None	Low	Maintain headland so there is no cultivation within 4m of drain.	30/09/2021	Drain is at the top of the paddock and the rows slope away from the paddock. The existing headland keeps cultivation away from the drain.	Yes	Yes
4	01/07/2021	Paddock 2	Yes	Low (0-1%)	Yes	Parallel to	None	Low	Establish 1m grass bund before next cultivation	30/09/2021	Drain runs parallel to crop rows so risk is low. Bund has been effective in other similar paddocks	Yes	Yes
5	01/07/2021	Paddock 3	No	Low (0-1%)	No	n/a	None required	Low	None	n/a	n/a. No cultivation or waterbodies	Yes	n/a
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