Resource Consent Guidelines for Constructing Culverted Stream Crossings in Small Rural Catchments

Applying for Resource Consent for Culverted Stream Crossings

1. To apply for resource consent you will need to fill out an Application for Resource Consent form and provide an Assessment of Environmental Effect (AEE). Attached is a form which is intended to help provide the information required for the AEE. The form is designed to provide the Marlborough District Council (MDC) with the required information, however, every consent is different and the Council Case Officer may request further information from you. If more information is requested the resource consent process will be delayed. To avoid delay please take your time filling in the application, write clearly and provide as much detail as possible.
2. When a stream crossing is over a large waterway, has a large catchment area, is near neighbouring boundaries, buildings, dwellings, or roads MDC may require an engineer's report and/or a higher standard of stream crossing to ensure public safety.

Marlborough Sounds Resource Management Plan

1. The installation of culverts, bridges and other stream crossings is a Discretionary Activity in the Marlborough Sounds Resource Management Plan – General Rules 26.1.4.5. Application must be made for resource consent for a Discretionary Activity.
2. Building Consent will be required for the culvert if it is over 3 metres in height. Please note that building consent and resource consent are different processes. If you require a building consent you will need to complete a separate building consent application form.

Guidelines for the Installation of New Culverts

1. Culvert slope should conform with the natural streambed slope.
2. Culvert alignment should conform with the natural stream channel.
3. The pipe should be installed 150mm below the normal streambed to allow for fish passage.
4. The head walls and culvert surround, consisting of rock or other suitable material, should not be more than 450mm above the culvert head to mitigate culvert impeding flood flows.
5. A secondary overland flood channel must be provided to mitigate culvert impeding flood flows.

Checklist

Before submitting your application ensure you have attached the following information:

- ❑ Completed "Application for Resource Consent" form
- ❑ Completed "Information to Accompany Resource Consent Applications" form
- ❑ Three labelled photographs, one of the crossing site, one looking upstream and one looking downstream of the crossing site
- ❑ A copy of a topographical map showing the catchment area and the proposed culvert site
- ❑ Building consent application lodged to MDC, if required

Information to Accompany Resource Consent Applications

Please read the following questions carefully and provide detailed answers.

1. Site Details

a) What is the name of the waterway?

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b) What is the nature of the bed? (Silt/sand/gravel)

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c) Please attach three labelled photographs one of the proposed site, one looking upstream and one looking downstream of the crossing site.

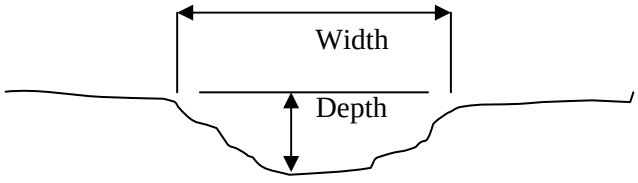
2. Catchment Area

a) Provide a copy of a topographical map showing the location of the stream crossing and the catchment area of the waterway. If you cannot provide a topographical map of the area please contact Marlborough District Council (MDC).

b) From the topographical map calculate in hectares the land area of the catchment. Calculate the catchment area by identifying the catchment area on the map and using the map scale.

Catchment Size = ☐ Hectares (Note: 2.4 acres = 1 hectare)

3. Dimensions of the channel at the proposed crossing site



Channel Width = ☐ Metre(s)

Channel Depth = ☐ Metre(s)

4. Are there any houses, roads, culverts, bridges or neighbouring properties within 100 metres of the proposed crossing? (Include all relevant features in proximity to the proposed crossing site).

If yes, please provide details of the structure(s). For example include the dimensions of any culverts or bridges within 100 metres proximity.

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5.Culvert Design

When designing stream crossing you made need to take into account sound engineering practise, however, Council has produced the following guidelines which you may choose to follow.

Size of Culvert Pipe(s)

a) Based on the channel depth in Question 3 select a culvert size from the table below.

Guidelines to Culvert Sizes	
Channel depth (m)	**Pipe Sizes (Diameter)**
Less than 1.0m	MDC to Assess
1.0-1.2m	0.3m
1.2 –1.4m	0.45m
1.4-1.6m	0.6 or 0.45m
1.6-1.8m	0.75, 0.6 or 0.45m
1.8 – 2.2m	0.9, 0.75 or 0.6m
2.2-2.6m	1.2, 0.9 or 0.6m
Greater than 2.6m	1.5, 1.2, 0.9 or 0.6m

Selected culvert size = [ ] Metre

Number of Culvert Pipes

b) Based on the catchment size in Question 2 select the number of culverts from the table below that will be required for the crossing.

Guidelines to Number of Culverts Required							
Catchment Size	0.3m	0.45m	0.6m	0.75	0.9m	1.2m	1.5m
0-10ha	1	-	-	-	-	-	-
10-25ha	2	1	-	-	-	-	-
25-50ha	4	2	1	-	-	-	-
50-75ha		3	2	1	-	-	-
75-100ha		4	2	1	1	-	
100-150ha			3	2	1	-	-
150-200ha			4	3	2	1	-
200-300ha				4	3	2	1
300-400ha				5	3	2	1
400-500ha					4	2	1

Number of Culvert(s) Required = [ ]

IMPORTANT NOTE: The above are guidelines only. The applicant is responsible for the selection of appropriate culvert size(s) and design. If the site is assessed as a high risk, for example there is a large catchment size or potential damage to property as outlined in Question 4, MDC may require a higher standard of culvert crossing.

6. Assessment of actual or potential effects on the environment

Adverse environmental affects to be considered:

For assistance when answering the following questions refer to "Guidelines for the Installation of New Culverts" on the front page of this sheet.

a) Physical Affects – Flood Flows

The proposed culvert could potentially inhibit flood flows, how could this be avoided, remedied or mitigated?

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b) Affects of the Ecosystem – Fish Passage

The proposed culvert could potentially inhibit fish passage, how could this be avoided, remedied or mitigated?

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c) Effluent Entering the Waterway in Heavy Rain

How could effluent entering the waterway in heavy rain be avoided, remedied or mitigated?

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d) Are there any other potential negative affects on the environment that you can see? If so how can these affects be avoided, remedied or mitigated?

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e) The bed of the stream will be disturbed by the construction of the proposed culvert. How long will the bed disturbances last?

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Positive Environmental Affects

What are the positive environmental affects? (For example the positive affects on water quality and aquatic life)

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7. Cross Section

Please provide a detailed site plan of the culvert in cross section. Including all relevant stream crossing dimensions showing the culvert set down 150mm into stream bed.

8. Site Plan

Please provide a detailed site plan, in birds eye view, showing the stream crossing, the water body that it crosses, floodwater course. Include all relevant streamcrossing dimensions.