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| **Part B**  **Assessment of**  **Environmental Effects –**  **Construct, Use or Repair a Dam or Weir** | M:\Community Relations\All Staff - Communication resources\NRC logos for general use\NRC logo (full colour).png  Whangārei Office Phone: 09 470 1200  Fax: 09 470 1202  Kaitāia Office Phone: 09 408 6600  Waipapa Office Phone: 09 470 1200  Ōpua Office Phone: 09 402 7516  Dargaville Office Phone: 09 439 3300  Free Phone 0800 002 004  Email mailroom@nrc.govt.nz  Website www.nrc.govt.nz |
| **This application is made under section 88/section 127 of the Resource Management Act 1991** | To: Consents Department  Northland Regional Council  Private Bag 9021  Whangārei Mail Centre  Whangārei 0148 |

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| PART B – ASSESSMENT OF ENVIRONMENTAL EFFECTS |
| Your application must include an Assessment of Effects on the Environment. This form is a guide to help you prepare it.  An assessment of effects is required so that you and others can understand what happens to the environment when you construct a dam. This will help you to propose ways to minimise those effects to the council’s satisfaction.  The degree of detail required is in proportion to the scale of the environmental effects of your proposal. If the size of your proposed activity or the scale of its potential effects is significant, a report by a professional advisor in support of your application may be required.  Please note that the word *“environment”* includes the surrounding waterways including coastal water, adjoining land, any surrounding resource users, and local iwi.  It is advised that you make an appointment with an appropriate council officer to discuss your application prior to lodging it. This will help you supply all the required information at the outset and ensure the efficient processing of your application. |

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| A. | Description of the Proposed Activity |

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| **A.1 What is the name of the stream or catchment on which you propose to construct the dam?** | |
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| **A.2 What is the topography of the site (e.g. steep sided gully, easy rolling, swampy)?** | |
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| **A.3 What is the soil/rock type at the dam site?** | |
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| **A.4 What is the vegetative cover of the dam site and area to be flooded?** | |
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| **A.5 Construction Details of the Proposed Dam** | | | |
| What is the height of the dam? | |  | m |
| What is the length of the dam? | |  | m |
| What is the approximate volume of earthworks involved in dam construction? | |  | m³ |
| What is the volume of water to be stored behind the dam? | |  | m³ |
| What surface area does the reservoir cover? | |  | m² |
| What are the dimensions of the spillway (for small floods)? | |  | m width |
|  | m length |
|  | m height |
| What are the dimensions of any auxiliary spillway  (for extreme floods)? | |  | m width |
|  | m length |
|  | m height |
| Provide justification (calculations) for the dimensions of the spill way | | | |
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| What materials are proposed for the dam? | | | |
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| Provide details on the properties of the materials, i.e. permeability | | | |
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| Details of the foundation of the proposed dam i.e. abutments, pipes through length of dam, any bore log details | | | |
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| **A.6 Dam Location Details**  **What are the characteristics of the site?** *(tick most appropriate description of the site and answer the associated questions)*  **Dry Gully** | | | | | | | |
| **Intermittently Flowing Stream** | | | | | | | |
| How many months on average would the stream be dry? | | | | | |  | |
| Dry between | |  | and |  | | | |
| **Permanently Flowing Stream** | | | | | | | |
| What is the design minimum flow (DMF) of the stream? | | | | |  | | litres/second |
| *(Note: The design minimum flow (DMF) of the stream is equivalent to the flow in the stream during a drought that occurs within a period of time (i.e. a 1 in 5 year drought event). It is the flow considered necessary to be maintained downstream of your dam to allow the aquatic organisms (e.g. fish and other instream life) to survive. Council staff can assist you with making this determination, where it is required.)* | | | | | | | |
| How was the DMF obtained? | | | | | | | |
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| **Wetland or Swamp** | | | | | | | |

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| **A.7 Catchment Details** | | | | |
| What is the catchment area upstream of the dam? | | |  | hectares |
| What is the estimated flood flow at the dam site during a 1 in 100 year storm event? | | | | |
|  | | |  | cubic metres/second |
| How was the flood flow calculated? | | | | |
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| What is the land use in the vicinity of the dam? *(tick more than one if appropriate)*  Agriculture  Horticulture  Exotic forestry  Native forest/bush  Residential/industrial (urban) | | | | |
| Other *(specify)*: | |  | | |

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| **A.8 Construction Timing Details** | | | |
|  | What date do you expect to start the works? | |  |
|  | When do you expect to complete the works? | |  |
| Will the works be carried out in stages?  No  Yes, please describe the length of time for each stage, and the type of works undertaken during each | | | |
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| How are the works to be carried out? *(please describe)* | | | |
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| Who will be undertaking the works? | | | |
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| B. | Location Maps and Plans |

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| B.1 Site Maps  You must attach a map(s) that shows the following:  The location of the dam and the upstream catchment boundaries  The legal property boundaries in the vicinity of the dam and the names of the owners and/or occupiers  The location of any other water users within 500 metres of your dam  The location of other streams, rivers and/or springs in the area, and the direction of stream flow |

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| B.2 Structure Plans  Please provide plans (including cross-sections) drawn to scale showing the following:  Dimensions of the dam structure (include height, length, width and batter slopes)  Site from which works material for dam construction is to be obtained  Surface area of the reservoir behind the dam, including during both normal and flood events, and location of the closest neighbouring properties to that reservoir  Dimensions and type of spillway(s), (e.g. concrete, pipe, grassed)  Any low flow pipes and their intake levels  Dimensions and design of any fish passes proposed  *Note: If the dam exceeds 5 metres in height and/or holds more than 20,000 cubic metres of water, it is likely that you will need to obtain the services of a registered engineer or a suitably qualified person.* |

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| C. | Assessment of Effects on the Environment |

Where your dam could have an adverse effect on the environment a detailed environmental assessment is required.

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| **C.1 Effect on the Stream**  Are there any of the following in the vicinity of the proposed works? | | | | |
|  | |  | **Present** | |
|  | |  | **Yes** | **No** |
|  | | Obvious signs or known aquatic biota (e.g. eels, other fish, insects, aquatic plants) |  |  |
|  | | Areas where food is gathered (e.g. watercress, eels, wildfowl) |  |  |
|  | | Natural Wetlands |  |  |
|  | | Recreational activities (e.g. swimming, fishing, canoeing) |  |  |
|  | | Areas of special aesthetic value (e.g. waterfalls) |  |  |
|  | | Areas of indigenous vegetation |  |  |
|  | | Areas of significance to iwi |  |  |
|  | | Areas of slope instability |  |  |
| If you have answered **Yes** to any of the above, describe what effect your taking may have and the steps you propose to take to minimise (i.e. mitigate) these effects (attach a separate sheet if necessary). | | | | |
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| If your proposed dam is located in a lowland part of a catchment, fish movement is likely to be impeded, and special measures would be required to mitigate these effects. Please describe how you intend to minimise these effects. | | | | |
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| **C.2 Construction Activities**  What stream diversion works are you proposing during dam construction?  Coffer dams  Pipeline bypass  Fish passes  Please provide details | |
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| Are you proposing any sediment retention or sediment control methods?  No, why not? | |
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| Yes, provide details | |
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| Are you proposing to topsoil and revegetate bare areas of land at the completion of works?  No, what are the mitigation measures to avoid erosion? | |
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| Yes, provide details on what, how and when revegetation will occur? | |
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| C.3 Alternative Dam Sites and Water Sources  Have you considered any alternative dam sites or water sources?  No  Yes, provide details on what alternatives were considered and why the proposed site was chosen | |
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| **C.4 Positive Effects**  What positive effects will the proposed dam have on the environment? | |
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| C.5 Monitoring  What, if any, monitoring do you propose to carry out to ensure that your dam does not have any adverse effect on the environment (i.e. monitoring program, surveillance system, emergency action plan)? | |
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| Do you propose any future operating or maintenance activities, which may effect dam safety?  No  Yes, provide details | |
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| *Note: Depending on the size of the proposed dam and the potential for adverse effects you may be required to supply an Emergency Action Plan.* | |

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| **C.6 Affected Parties**  Will the damming of water have an effect on the water available to any nearby property, or will the reservoir affect adjacent properties?  No, why not? | |
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| Yes, who and how? | |
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| Where the proposed dam may adversely affect neighbours or other persons, the written approval of those persons is required in order to avoid notification of the application. | |

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| **C.7 Consultation** | | | | |
|  | Have you consulted with any of the following potentially affected parties: | |  |  |
|  |  | | **Yes** | **No** |
|  | Neighbours | |  |  |
|  | Other downstream water users | |  |  |
|  | Department of Conservation *(if relevant)* | |  |  |
|  | Fish and Game Council *(if relevant)* | |  |  |
|  | Local iwi *(specify)*: |  |  |  |
|  | Other *(specify)*: |  |  |  |
|  | Please attach a record of the consultation that has taken place and the views of those that have been consulted. | | | |

***Please ensure all the relevant questions on this form have been answered fully.***

***If you have any queries relating to information requirements or wish to meet with a council consents officer, please contact the Northland Regional Council.***

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| Northland Regional Council offices: | | | | |
| Whangārei Office | Dargaville Office | Kaitāia Office | Waipapa Office | Ōpua Office |
| 36 Water Street  Whangārei 0110  Phone: 09 470 1200  or 0800 002 004  Fax: 09 470 1202  mailroom@nrc.govt.nz  www.nrc.govt.nz | 42 Hokianga Road  Dargaville 0310  Phone: 09 439 3300 | 192 Commerce Street  Kaitāia 0410  Phone: 09 408 6600 | Shop 9  12 Klinac Lane  Waipapa 0295  Phone: 09 470 1200  or 0800 002 004  Fax: 09 470 1202 | Unit 10  Industrial Marine Park  Ōpua 0200  Phone: 09 402 7516 |