

# APPLICATION FOR RESOURCE CONSENT

## Form B3 - Assessment of Effects on the Environment (AEE)

### To Take or Use Surface Water



Auckland  
Regional Council  
TE RAUHĪTANGA TAIAO

To: General Manager  
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#### How do I fill in this form?

The following questions will help you to provide all the information needed for an Assessment of Environmental Effects (AEE) of your proposed activity. It may be appropriate in some cases to address matters in addition to those identified in the form.

The information you supply should have the level of detail according to the scale and significance of effects that the activity may have on the environment and should be relevant to your proposal e.g. where effects are greater, due to factors such as large volumes pumped, small stream flows or high habitat value, then more detail may be required.

For ease of checking, it is preferable that the issues are addressed in the same sequence as outlined in the checklist. Where relevant, place a tick ✓ in the box if you have provided the information and give a reference to the section of the AEE report it is in.

#### Take and use surface water – why is a resource consent required?

Section 14 of the Resource Management Act 1991 (RMA) provides for the regulation of the taking, use, damming and diversion of both freshwater and geothermal water.

The activity may be subject to rules in both the Auckland Transitional Regional Plan 1991 (TRP) and the Proposed Auckland Regional Plan: Air, Land and Water (PARP:ALW). As all the relevant provisions of the PARP:ALW are not yet operative the status of the activity is determined as the more restrictive of the relevant rules of both plans.

Auckland has small, short streams, small lakes, low-yielding aquifers (dominated by the Waitemata Sandstone Aquifer) and moderate rainfall. The absence of riparian vegetation, stock trampling of stream margins, and point source and non-point source discharges contribute to water quality degradation, which can also limit how much water that can be taken from a water body.

Inefficient taking and use of water can limit the number of users who can benefit from a water source; taking more water than is needed, wasting water, poor matching of water use with actual needs and supply system losses all reduce the amount of water available for other people to use and can also unnecessarily increase the volume of wastewater needing disposal.

#### For Office Use Only

FORM A – WBS: \_\_\_\_\_

Consent No: \_\_\_\_\_

Other Related Consent Nos: \_\_\_\_\_

Customer No: \_\_\_\_\_

Fee / Deposit Paid: \$ \_\_\_\_\_

File No: \_\_\_\_\_

Site Address: \_\_\_\_\_

Applicant: \_\_\_\_\_

Chapter six Water Allocation of the PARP:ALW (June 2005) deals with issues associated with water quantity and allocation, including:

- the taking and using of fresh and geothermal water
- the damming of surface water
- the diversion of groundwater
- the quantity, level and flow of water in any water body.

Drilling is also addressed because of its association with the taking of groundwater.

Chapter six also contains a number of policies that outline what proposals to take or use surface water must demonstrate in order for consent to be granted – refer Policies 6.4.4 and 6.4.22.

It is important to know whether the stream is in a Wetlands Management Area or a High Use Streams Management Area (HUSMA). These areas are identified on the PARP:ALW October 2004 map series one (sheets 1-54). They are described in sections 3.2 and 3.7 of the PARP:ALW.

For taking water from a dam, it is also important to know whether the dam is on a Permanent river or stream as defined in chapter 12 of the PARP:ALW.

More information concerning taking and using surface water can be found in the ARC's Water fact sheets;

Water Fact sheet 1	Using water wisely
Water Fact sheet 4	Why you have to fit a water meter
Water Fact sheet 6	Complying with your water permit
Water Fact sheet 7	Saving Water
Water Fact sheet 9	Environmental Monitoring Information

The status and rules for any activity to take or use surface water from any source are given in the following table. Most rules are subject to standards and terms given in the PARP:ALW.

Source of take	Quantity	During irrigation season 1 November to 31 April	In Wetlands or High Use Streams Management areas	Status of Activity	PARP: ALW Rule
<b>Taking or use of surface water other than provided for by Permitted Activity rules, 6.5.7, 6.5.8, 6.5.63 and 6.5.64.</b>					
Lake	20 – 100 m <sup>3</sup> /day	-	-	Controlled	6.5.10
Lake	> 100 m <sup>3</sup> /day	-	-	Discretionary	6.5.16
River, stream or spring	≤100m <sup>3</sup> /day	No	-	Controlled	6.5.9
River, stream or spring	> 100 m <sup>3</sup> /day	No	No	Discretionary	6.5.13
River, stream or spring	> 5 m <sup>3</sup> /day	Yes	No	Discretionary	6.5.14
River, stream, spring or wetland	> 5 m <sup>3</sup> /day	-	Yes	Discretionary	6.5.15
Existing Dam on Permanent stream	≤ 100 m <sup>3</sup> /day	No	No	Controlled	6.5.65
Dam	-	-	-	Discretionary	6.5.67

**Note:** ≤ means less than or equal to and > means greater than.

## Form B3 – To Take or Use Surface Water

### Answer the following and/or discuss the following items in your AEE report

Where relevant, place a tick ✓ in the box if the item applies and has been provided in the report and give a reference to the section of the report it is in.

ARC Accepts / Rejects	A. Consultant / Specialist Explanation If one or more consultants or specialists have assisted in preparing this AEE report, provide their details below.
	<b>A.1 Name of Consultant:</b>
	<b>A.2 Area of Expertise:</b>
	<b>A.3 Postal Address:</b> _____ _____ _____ <b>Postal Code:</b> _____
	<b>A.4 Street Address: (if different from above)</b> _____ _____ _____ <b>Postal Code:</b> _____
	<b>A.5 Phone Numbers</b>
	<b>Business:</b>
	<b>Mobile:</b>
	<b>Fax:</b>
	<b>A.6 Email address:</b>
	<b>A.7 Name of Consultant:</b>
	<b>A.8 Area of Expertise:</b>
	<b>A.9 Postal Address:</b> _____ _____ _____ <b>Postal Code:</b> _____
	<b>A.10 Street Address: (if different from above)</b> _____ _____ _____ <b>Postal Code:</b> _____
	<b>A.11 Phone Numbers</b>
	<b>Business:</b>
	<b>Mobile:</b>
	<b>Fax:</b>
	<b>A.12 Email address:</b>

ARC Accepts / Rejects	<b>1.0 Description of the Proposal</b>
	<p><b>1.1</b> If the site from which the water is to be TAKEN, is NOT on the property where water is to be used (as stated in Form A), provide details:</p>
	<p><b>1.1.1</b> Full name(s) of Owner: _____  Postal address of Owner:  _____  _____  _____</p>
	<p><b>1.1.2</b> Full name(s) of Occupier: _____  Postal address of Occupier:  _____  _____  _____</p>
	<p><b>1.1.3</b> Legal description of land where take point is situated:  Lot _____ DP _____ CT _____  Other (specify) _____</p>
	<p><b>1.1.4</b> Address / Location:  _____  _____  _____  _____</p>
	<p><b>1.1.5</b> If you are not the owner of the water source, attach written approval to use the source from the owner or obtain a signature below:</p> <p><i>You can apply for a permit to take water from a source which is not on your property. However, you may wish to obtain an easement on both property titles giving you and subsequent owners legal access to the source of water. A water permit does not do that. Similarly, an easement does not authorise the taking of water where a consent is required from the ARC.</i></p> <p style="text-align: right;"><input type="checkbox"/> Written Approval attached (✓)</p>

ARC Accepts / Rejects	
	<p>Name of Owner: _____</p> <p>Address: _____</p> <p>_____</p> <p>I authorise / permit _____ to take water from my property.</p> <p>Signature: _____</p>
	<p><i>Provide the name and address of the owner and occupier (if different to landowner) of the land where the water will be taken or if owned by the Crown (i.e. Crown riverbed), the land adjacent to the water take. A copy of your Certificate of Title may be obtained from Land Information New Zealand (<a href="http://www.linz.govt.nz">www.linz.govt.nz</a>). LINZ may also require a licence for you to occupy the bed of the water body with your intake structure (contact LINZ directly).</i></p> <p><i>If the take is from the bed of a large river (particularly 'navigable rivers') the bed will likely be owned by the Crown. The beds of smaller watercourses are sometimes owned by the adjacent landowner(s).</i></p>
	<p><b>1.1.6</b> All formal documentation confirming easements and/or covenants including Certificate of Title of the property where the take occurs are attached. <input type="checkbox"/> (✓)</p>
	<p><b>1.2</b> Map reference of Take Point: _____ mE _____ mN.</p> <p>Use New Zealand Transverse Mercator (NZTM) e.g. 1756730mE 5919740mN.</p> <p>Use a geographic positioning system (GPS) device if possible to obtain a map reference accurate to 10m. The northing follows the easting. If you do not have a map reference, ensure that the location of your take point is marked to an accuracy of 10m on your location plan.</p>
	<p><b>1.3</b> Source of Water</p> <p><input type="checkbox"/> River/Stream      <input type="checkbox"/> Existing dam      <input type="checkbox"/> Proposed dam</p> <p><input type="checkbox"/> Spring      <input type="checkbox"/> Lake      <input type="checkbox"/> Estuary      <input type="checkbox"/> Sea</p> <p><i>If you are unsure of the name of the water body and your application is a replacement of an existing consent, the easiest way to find out the name of the water body from which you take water is by checking your existing resource consent. If you are unsure of the name of the water body and the application is for a new water take, the ARC will be able to help you. In many instances tributaries to larger water bodies do not have official (or legally recognised) names. If this is the case describe the water body as "an unnamed tributary of .....". If the water body has an unofficial local name you could continue to write "... locally known as.....". You can determine if a name is legally recognised by seeing if it is written on published topographic maps or if any road bridges crossing it state the name of the water body (i.e. Transit or Automobile Association signs).</i></p>

ARC Accepts / Rejects							
	<p><i>Note: That the damming of water, (whether the dam is existing or proposed) requires a separate resource consent (use form B4) which is additional to a permit for the taking of water or may be authorised as a permitted activity. Contact the ARC to discuss whether or not you are required to apply for an additional consent. You should also check whether a building consent is required for the dam and include a copy with your application.</i></p>						
	<p><b>1.3.1</b> Give the name of the stream, river or lake (or if the stream is unnamed, state what water body it is a tributary of):</p> <p>Name: _____ or tributary of _____</p> <p>Stream number (office use only) <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td><td style="width: 20px; height: 20px;"></td></tr></table></p> <p>(If you are unsure of the name of the water body, the ARC will be able to help you. In many instances tributaries to larger water bodies do not have official (or legally recognised) names. If this is the case describe the water body as “an unnamed tributary of...”)</p>						
	<p><b>1.3.2</b> Is the stream in a Wetlands Management Area identified in the PARP:ALW October 2004 map series one (sheets 1-54).</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>						
	<p><b>1.3.3</b> Is the stream in a High Use Streams Management Area (HUSMA) identified in the PARP:ALW October 2004 map series one (sheets 1-54).</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>						
	<p><b>1.3.4</b> If the take is from a dam, is the dam located on a Permanent river or stream as defined in chapter 12 of the PARP:ALW.</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p>Reasons:</p> <p>_____</p> <p>_____</p> <p>_____</p> <p><i>Note: The taking of water from dams on Permanent rivers or streams is subject to any minimum flows and/or other flow regime requirements for rivers and streams set in accordance with the policy of the PARP:ALW or National Environmental Standard (NES).</i></p>						
	<p><b>1.4</b> Purpose for which water is to be taken and/or used: <i>(tick as appropriate)</i></p> <p><input type="checkbox"/> Irrigation      <input type="checkbox"/> Industry      <input type="checkbox"/> Private Community Water Supply      <input type="checkbox"/> Municipal supply      <input type="checkbox"/> Stock Purposes      <input type="checkbox"/> Domestic</p> <p>Other (specify)</p>						

ARC Accepts / Rejects	
	<p><b>1.5</b> If use is for IRRIGATION</p> <p><i>If water is to be taken for irrigation, provide details of the calculation of your water requirements, including any information supplied to you by consultants and any meteorological data or scientific information on crop water use that you have used. The level of detail required may depend on the scale of activity. Answer the following questions and/or provide details in a separate report. Contact the ARC for advice on the level of information you should provide.</i></p> <p><input type="checkbox"/> Details attached in separate report. (Refer 1.5.13 to 1.5.19.)</p>
	<p><b>1.5.1</b> <b><i>If you are not providing a separate report, answer the following questions:</i></b></p> <p>State the area irrigated of each of the following:</p> <p>Orchard _____ ha    Market Garden _____ ha    Sportsfield/Golf Course _____ ha  Nursery _____ ha    Glasshouse _____ ha    Plastic house _____ ha  Pasture _____ ha    Other _____ ha</p>
	<p><b>1.5.2</b> For pasture state stock type/number grazing: _____</p>
	<p><b>1.5.3</b> For crop irrigation state principal crops, area of each irrigated and if this may vary from year to year:</p> <p>_____ ha  _____ ha  _____ ha</p>
	<p><b>1.5.4</b> Indicate whether the area to be irrigated is:</p> <p><input type="checkbox"/> Existing    <input type="checkbox"/> Partly Developed    <input type="checkbox"/> Proposed</p>
	<p><b>1.5.5</b> Total area to be irrigated _____ m<sup>2</sup>, or ha.</p>
	<p><b>1.5.6</b> Maximum area to be irrigated on a daily basis _____ m<sup>2</sup>, or ha.</p>
	<p><b>1.5.7</b> Maximum period of irrigation _____ hours per day.  From _____ am or pm.    To _____ am or pm.</p>
	<p><b>1.5.8</b> What is the target (net) application rate? _____ mm/day.</p>

ARC Accepts / Rejects	
	<p><b>1.5.9</b> Describe the soil types of the areas to be irrigated and state the source of this information:</p> <p>_____</p> <p>_____</p>
	<p><b>1.5.10</b> Months of the year that irrigation may occur. From _____ To _____</p>
	<p><b>1.5.11</b> Types of irrigation: <input type="checkbox"/> Sprinkler <input type="checkbox"/> Trickle <input type="checkbox"/> Travelling Irrigator</p> <p>Other _____</p>
	<p><b>1.5.12</b> Maximum rate that system can deliver _____ cubic metres per hour.</p>

ARC Accepts / Rejects	Item No.	Item	Information Provided ✓  Report Reference e.g. ✓ 3.2
		<b><i>If you are providing information regarding irrigation requirements in a separate report, you should consider the following:</i></b>	
	1.5.13	What is your planned method of irrigation (sprinkler, trickle etc) and what is the efficiency of delivery to the crop, if known? Give the make and model of any travelling irrigator and provide any technical specification sheets.	
	1.5.14	What is the maximum irrigation rate that this system can deliver? ( <i>You can determine this from the technical specifications or, if you already have a water meter, by taking two readings an hour apart</i> ).	
	1.5.15	Will you be irrigating throughout the year or only during the summer? What is your total annual demand?	
	1.5.16	What time of day will you irrigate and for how long?	
	1.5.17	Are there any records of previous water use on the site or elsewhere that would help to demonstrate the quantity of water required? If so, you should provide them. ( <i>For replacement consents, ask ARC staff for a copy of your water meter readings</i> ).	
	1.5.18	State if any programmes are practised at the site for measuring soil moisture levels and if these are used as a trigger for irrigation, for water conservation or for leak detection inspections and test programmes.	
	1.5.19	Give details of any proposed future expansion or changes to crop types and approximate timetable.	

ARC Accepts / Rejects	
	<p><b>1.6</b> If water is to be used for INDUSTRY</p> <p><i>If water is to be taken for industrial purposes, you may be required to undertake a water audit of the site water use. The ARC can advise you on this requirement and have water audit guidelines for those required to undertake an auditing process.</i></p>
	<p><b>1.6.1</b> State the type of industry and the process in which water is used:</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>1.6.2</b> Has a water audit been completed on your activity?</p> <p><input type="checkbox"/> Yes                      <input type="checkbox"/> No</p> <p>Provide details:</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>1.6.3</b> Are there any water conservation or leak detection programmes practised?</p> <p><input type="checkbox"/> Yes                      <input type="checkbox"/> No</p> <p>Provide details:</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>1.6.4</b> <input type="checkbox"/> Report / Letter justifying quantities applied for attached (<i>tick if relevant</i>).</p>
	<p><b>1.7</b> If water is to be used for PRIVATE COMMUNITY WATER SUPPLY</p> <p><i>Private community water supplies are typically owned and operated by private individuals, trusts or institutions and supply more than one household or institutions that may accommodate large numbers of people (e.g. campgrounds or hospitals). For applications to supply water to households, the ARC considers that up to 1,000 litres per day per household may be considered 'reasonable domestic use'. For all applications the calculation of water requirements is needed.</i></p>

ARC Accepts / Rejects																	
	<p><b>1.7.1</b> What type of institution / development uses the water?</p> <p><input type="checkbox"/> Households – number of households supplied:</p> <p><input type="checkbox"/> Campgrounds – maximum number of visitors and staff:</p> <p><input type="checkbox"/> Schools – maximum number of students and staff:</p> <p><input type="checkbox"/> Other: <i>(specify and give details of no. of people)</i></p>	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;"></th> <th style="width: 15%; text-align: center;">Number</th> <th style="width: 15%; text-align: center;">Estimated Water Requirement</th> </tr> </thead> <tbody> <tr> <td>_____</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>_____</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>_____</td> <td style="text-align: center;">_____</td> <td></td> </tr> <tr> <td>_____</td> <td style="text-align: center;">_____</td> <td></td> </tr> </tbody> </table>		Number	Estimated Water Requirement	_____	_____		_____	_____		_____	_____		_____	_____	
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	<p><b>1.8</b> If water is to be used for PUBLIC COMMUNITY (MUNICIPAL) SUPPLY, state population supplied: _____</p> <p>Provide:</p> <p><b>1.8.1</b> - A demand management plan/programme</p> <p><b>1.8.2</b> - A drought management plan</p> <p><b>1.8.3</b> - A network efficiency and water conservation management plan</p> <p><b>1.8.4</b> - An analysis of the wastewater disposal requirements associated with the water take</p>																
	<p><b>1.9</b> If some water is to be used for DAIRY SHED or STOCK PURPOSES, state type of animal, number and purpose (e.g. drinking water, wash down):</p> <p><i>Different animals have different drinking water requirements. As a general rule, the ARC considers 0.2 l/day/bird poultry 10 l/day/head sheep, 50 l/day/head cattle, 15 l/day/head deer, 70 l/day/head dairy cows (or 120 l/day for the period when a dairy shed is used) to be reasonable. However, your estimates may differ to that of the council. If this is so, state the estimated amount required and the source of your information.</i></p> <p>Animal type: _____ Number: _____</p> <p>Purpose: _____</p> <p><b>1.9.1</b> Estimated amount required: _____ m<sup>3</sup>/day _____ m<sup>3</sup>/year.</p>																
	<p><b>1.9.2</b> Basis for estimation:</p> <p>_____</p> <p>_____</p>																
	<p><b>1.10</b> If some water is to be used for DOMESTIC (HOUSEHOLD) USE, state number of houses and average number of people within each household:</p> <p>No. households: _____ Average no. of people per household: _____</p>																



ARC Accepts / Rejects	
	<p><b>1.14</b> Intake details</p> <p><i>Surface water intake structures must be designed, constructed, operated and maintained to avoid adverse effects on biota, including the entrainment and impingement of fish.</i></p> <p><i>A description of the intake structure and or a drawing should be attached (include stream shape, distance of intake from stream bank, depth of intake, location of pump and any areas of scouring or stream bank erosion).</i></p> <p><i>Most intakes have a screening device located on the end of the pipe that sits in the water. This screen has two main functions. Firstly, the screen reduces the likelihood of weed and debris clogging the pump. Secondly, the screen (if designed properly) will prevent fish and other aquatic organisms being sucked from the water. The easiest way to check if a screen is fitted is to lift the intake pipe out of the water and examine the end of the pipe. The screen will be obvious as it usually consists of a round or square metal or rigid structure with holes or slots in.</i></p> <p><i>If you have a screen installed, examine it as described above and make a sketch drawing of it (attach the drawing to the application on a separate sheet – refer Q.1.14.2). Use a ruler or tape measure to work out the dimensions, paying particular attention to the size of the holes or slots and the number of these per unit area. If the screen is poorly designed for the purposes of preventing the uptake of small fish and elvers, the ARC will require you to replace it.</i></p>
	<p><b>1.14.1</b> Will a screen be fitted on the intake?</p> <p><input type="checkbox"/> Yes, a screen is or will be fitted.</p> <p><input type="checkbox"/> No, a screen will not be fitted. (<i>Justify why you consider that no screen should be fitted.</i>)</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>1.14.2</b> If a screen is or will be fitted to the intake, what are the dimensions of the screen, including the hole/slot size? (<i>a drawing showing the shape and measurements of the screen may be useful, this can be attached to the application.</i>)</p> <p>Screen width _____ mm    Screen diameter _____ mm</p> <p>Hole/slot size _____ mm    Density of holes/slots _____ number/cm<sup>2</sup></p> <p>Drawing attached:        <input type="checkbox"/> (✓)</p>

ARC Accepts / Rejects	Item No.	Item	Information Provided ✓
	2.0	<b>Site Plan</b> – Show the following on the Site Plan: (provide one set of plans reduced to A3)	
	2.1	Title box including: <ul style="list-style-type: none"> <li>• The name of the person and/or company that prepared the plans.</li> <li>• Address of property.</li> <li>• Date plans were drawn.</li> <li>• Unique plan reference or identification or variation number where relevant.</li> </ul>	
	2.2	Legend explaining symbols on the Site Plan.	
	2.3	North point (orientated to the top of the page if possible).	
	2.4	Appropriate metric scale e.g. 1:2000 (1cm = 20m) and page size reference (e.g. @ A3).	
	2.5	Scale bar.	
	2.6	Total site area in hectares or m <sup>2</sup> .	
	2.7	Road frontages and names.	
	2.8	Property boundary dimensions – existing and future ( <i>where relevant</i> ).	
	2.9	Adjoining street numbers.	
	2.10	Location of existing and proposed structures, roads, buildings, fences etc.	
	2.11	Direction of ground slope (indicate with arrows).	
	2.12	Names of neighbouring property owners (if possible).	
	2.13	Location of the river/stream/lake or dam from which you propose to take water.	
	2.14	Location of the take point.	
	2.15	The area in which the water is to be used.	
	2.16	Location of any upstream or downstream water users, waste discharges or dams.	
	2.17	Location of any stream culverts on your property.	
	2.18	Location of existing vegetation, any proposed removal and planting, including riparian.	
	2.19	Location of any cultural heritage features including historic, waahi tapu and archaeological sites on the site and environs. ( <i>Refer to section 3.9 of this form</i> )	
	2.20	Location of any natural heritage features e.g. indigenous vegetation and / or any significant ecological or geological features or features with significant natural heritage and / or conservation values e.g. volcanic cones, wetlands etc on the site and environs. ( <i>Refer to section 3.10 of this form</i> )	

<p>ARC Accepts / Rejects</p>	<p><b>3.0 Actual and Potential Effects on the Environment</b> - identify and assess the actual or potential effects on the environment of your proposed activity.</p> <p><i>For the purposes of this section, you need to consider the effects of your proposed take under the “worst case scenario”. For most water takes, the worst case scenario is when the quantity of water being taken is greatest and occurring over the longest time period (e.g. drought conditions for irrigation). An assessment of the stream catchment may already have been completed.</i></p> <p><i>Sufficient minimum flows must be retained in streams to maintain instream values. These instream values include cultural and Tāngata Whenua concerns, fisheries, recreation, the stream’s natural character, indigenous vegetation and fauna, habitat, scenic, amenity and intrinsic values. Natural flow variability is important for stimulating migration of fish and maintaining acceptable ecological conditions in streams. These values can have different requirements of stream flow. Streams in the Auckland region are quite variable in their flows, even from similar sized catchments. This is due to differences in rainfall, topography, geology, vegetation and physical characteristics. Pumping water from rivers, streams, dams or lakes can cause changes in water levels or flows which can lead to reduced water depth, velocity, wetted area and waste assimilation capacity. These can in turn encourage the growth of algae, increased temperatures, oxygen depletion, changes in composition of ecosystems, loss of habitat, degradation to fisheries and loss of recreation opportunities.</i></p> <p><i>If you propose to take water from a stream or lake, then you need to adequately describe the present characteristics (width, flow, bed, riparian vegetation, and stock fencing) and values (stream life, wetland habitats, recreation, significances to iwi) of the lake or reach of stream which you propose to take water from. This is so that potential effects on the water body can be determined. You may be able to obtain information from the ARC on stream flow during typical low flow periods.</i></p> <p><i>For large takes it may be necessary to undertake a more detailed assessment which describes the direct, indirect, cumulative, short term or long term actual or potential effects of taking water on the water resources and other users. Such an assessment should consider the effects of the take on:</i></p> <ul style="list-style-type: none"> <li>• Stream flows</li> <li>• Water quality</li> <li>• Habitat/ecology</li> <li>• Amenity values of the stream environment</li> </ul>
	<p><b>3.1</b> Effects on the surface water resource and other water users</p> <p><i>Provide as much detail as possible on nearby water sources and users and consider whether or not any of these will be affected. You need to consider whether your proposed water take will have any effect on the availability of water for other users. This will depend on the volume of water you propose to take relative to the size of the water body and the distance downstream to the next inflow of water (i.e. where the next stream or tributary joins the water body you propose to take from). You must demonstrate that your proposal will not cause the water availability for the water body to be exceeded. A more detailed assessment may be necessary depending on the quantity which you wish to take and the location of potentially affected water sources and parties. Your proposed take may be subject to an existing minimum flow regime and maximum water availability for the water body. The ARC will be able to advise you on this.</i></p>

ARC Accepts/ Rejects	
	<p><i>The ARC must ensure that the water resource is used efficiently. Measures that may be undertaken to minimise wastage and maximise efficient use will differ depending on what the water is used for. The following are examples for different water uses:</i></p> <ul style="list-style-type: none"> <li>• <i>For irrigation takes, water may be applied at night, and in calm weather conditions only. Irrigation consultants can provide technical information on exactly how much water certain soil and crop types require in different areas of the Auckland region.</i></li> <li>• <i>For industrial purposes, a known volume of water may be required per unit of product for certain purposes. Maintenance of equipment may minimise leakages.</i></li> <li>• <i>For private or public community water supplies, water restrictions may be applied during water short periods e.g. hand-held watering of gardens only, restrictions on car washing etc. Some public supplies may have flow restrictors.</i></li> </ul>
	<p><b>3.1.1</b> Have you, a hydrologist (or other appropriate consultant) or the ARC prepared an assessment of minimum flow regime requirements and/or surface water availability in the catchment or reach of stream or prepared an assessment of the effects of your abstraction?</p> <p><input type="checkbox"/> Yes    <input type="checkbox"/> No</p> <p>If <b>YES</b>, reference it in detail or attach a copy of assessment report.</p> <hr/> <hr/> <hr/>
	<p><b>3.1.2</b> Use the table on Page 16 to provide the following information relating to all adjacent properties and/or immediately downstream and to the nearest property with a surface water take or dam upstream and downstream (if not adjacent):</p> <ol style="list-style-type: none"> <li>a) The names, postal addresses (including RD or PO Box number), site address (including street number on gate) of the property owners/occupiers;</li> <li>b) Indicate whether or not there are any springs, wetlands, streams or dam on each of these properties;</li> <li>c) Indicate whether or not water is taken from any water sources (and any permit numbers, if known);</li> <li>d) Indicate the distance between each water body or source and your existing or proposed pump/dam; and</li> <li>e) Describe the purposes for which they take water (e.g. stock water, domestic supply, irrigation etc).</li> </ol>

The names of property owners and locations of water sources should also be shown on your location map.

Attach details on a separate sheet as set out below:

Further details attached (*tick if relevant*).

(A) Name and Post Address <i>e.g. Ann Bode, PO Box 100 Auckland</i>	(B) Site Address <i>100 Main Rd, Pukekohe</i>	(C) Water Body/Source(s) <i>Stream/Bore/Spring</i>	(D) Is Water Taken <i>No / Yes</i>	(E) Distance to your Proposed Bore (m) <i>300m</i>	(F) Use(s) of Water <i>Domestic Supply</i>

ARC Accepts/ Rejects	
	<p><b>3.1.3</b> Do you anticipate that your proposal to take surface water may affect any of these water bodies, water sources or users (e.g. wetland dried out, reduced water availability for any neighbours)?</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No      <input type="checkbox"/> Separate report attached.</p> <p>Explain (or indicate if this has been addressed in a separate report).</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>3.1.4</b> Describe the watercourse downstream of the stream pump or dam site during the typical low flow period January to April.</p> <p><i>The first four questions are self explanatory but the measurements should reflect the conditions of the water body during the summer months (i.e. when flows and depths are at their lowest). The flow velocity can be estimated by measuring the time it takes a stick or other floating object to travel a set distance downstream. The ARC or other organisations (e.g. NIWA) may measure flows in your river at certain locations.</i></p>
	<p><b>3.1.4.1</b> Average width of watercourse _____ m.</p>
	<p><b>3.1.4.2</b> Average depth of water _____ m.</p>
	<p><b>3.1.4.3</b> Average water flow velocity _____ m/s.</p>
	<p><b>3.1.4.4</b> Estimate of summer low flow _____ litres per second as at date _____.</p>
	<p><b>3.1.4.5</b> Where and how this was obtained.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>(You may provide details on a separate sheet) <input type="checkbox"/> Attached in separate report.</p>
	<p><b>3.1.5</b> For rivers/stream takes, state the proportion of low flow you intend to take at the low flow times ____%. Attach any stream flow data or observations which show there is sufficient water available in the water course for your activity.</p> <p><input type="checkbox"/> Data attached.</p>
	<p><b>3.2</b> Effects on riparian and in-stream ecology.</p>

ARC Accepts / Rejects	
	<p><b>3.2.1</b> Describe the bed and banks of the stream e.g. is it gravelly, muddy or sandy, boulders, hard rock, are there any large pools, give bank slope etc.</p> <p>_____</p> <p>_____</p>
	<p><b>3.2.2</b> Will the intake structure cause erosion of the streambanks? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If <b>YES</b>, describe: _____</p> <p>_____</p> <p>_____</p>
	<p><b>3.2.3</b> Give details (type and extent) of any vegetation bordering the stream e.g. pasture, bush, weeds. Show this on the site plan (photos may be useful).</p>
	<p><b>3.2.4</b> Describe any vegetation overhanging the stream.</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>3.3</b> Describe the extent to which the stream is fenced from stock on your property and immediate neighbours properties. Show this on the site plan if relevant.</p>
	<p><b>3.4</b> Does your stock or any of your neighbours stock enter or drink from streams?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If <b>YES</b>, describe: _____</p> <p>_____</p> <p>_____</p>
	<p><b>3.5</b> Are there any culverts in the stream on your property? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>If <b>YES</b>, describe: _____</p> <p>_____</p> <p>_____</p>
	<p><b>3.5.1</b> Is there a drop in level on the downstream side of the culvert? (<i>Note: culvert drops obstruct passage of fish</i>).</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Describe location and dimensions of drop</p> <p>_____</p> <p>_____</p> <p>_____</p>

ARC Accepts / Rejects	
	<p><b>3.6</b> Have any water quality analyses been undertaken on the stream?</p> <p><input type="checkbox"/> Yes (If <b>YES</b>, attach copy)      <input type="checkbox"/> No      <input type="checkbox"/> Water Quality Analyses attached.</p>
	<p><b>3.7</b> For the stream on your property and in reasonable proximity to the take point or dam site, are there any of the following:</p>
	<p><b>3.7.1</b> Obvious signs of biota? (e.g. fish, shellfish, insect life, aquatic plants)</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>
	<p><b>3.7.2</b> Areas where food is gathered from the water? (e.g. watercress, eels, kaimoana)</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>
	<p><b>3.7.3</b> Significant wetlands? (e.g. large swamp areas)</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>
	<p><b>3.7.4</b> Point source or non-point source waste discharges? (e.g. from rural sources, industries, sewage treatment plants)</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>
	<p><b>3.7.5</b> Recreational activities carried out? (e.g. swimming, fishing, canoeing)</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>
	<p><b>3.7.6</b> Areas of particular aesthetic value? (e.g. scenic waterfall, rapids)</p> <p><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>
	<p><b>3.8</b> If the take is from a spring, give minimum summer flow rate (litres/second) and how this was obtained?</p> <p><i>An estimate of the minimum flow from the spring needs to be given. This can be estimated a number of ways. The time taken to fill a bucket of a known capacity (e.g. 10 litres) is called a volumetric estimate. If this method is to be used then the measurement should be done a number of times and the average used. Spring flows are usually lowest in late summer/early autumn.</i></p> <p>Flow rate: _____ litres/second as of date _____.</p>
	<p><b>3.8.1</b> Describe the methodology of how the flow rate was obtained</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

ARC Accepts / Rejects	
	<p><b>3.9</b> Effects on cultural heritage</p> <p><i>The following may help you identify any cultural heritage features on your site:</i></p> <ul style="list-style-type: none"> <li>• <i>Check the Auckland Regional Cultural Heritage Inventory (CHI) for historic or cultural heritage information.</i></li> <li>• <i>The New Zealand Historic Places Trust has a register of historic places, archaeological sites, historic areas waahi tapu and waahi tapu areas.</i></li> <li>• <i>The Auckland Regional Plan: Coastal (ARP:C) schedules one and two contain a list of protected and preserved historic and cultural heritage sites.</i></li> <li>• <i>District Plans have schedules of protected cultural heritage items.</i></li> <li>• <i>Appendix B of the Auckland Regional Policy Statement (ARPS) contains a list of significant natural heritage values and identifies sites and areas of special value to Tāngata Whenua.</i></li> <li>• <i>Areas/places that are significant to Tāngata Whenua may only be identified during consultation.</i></li> </ul>
	<p>In reasonable proximity of the proposed take, are there any:</p> <p><b>3.9.1</b> Archaeological or cultural heritage features e.g. historic place, building</p> <p style="text-align: right;"><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p><b>3.9.2</b> Areas or aspects of significance to Māori or Tāngata Whenua e.g. waahi tapu, pa site</p> <p style="text-align: right;"><input type="checkbox"/> Yes      <input type="checkbox"/> No</p>
	<p><b>3.9.3</b> If <b>YES</b> to any of the previous features, then describe what is present and identify what adverse effects your activity may have.</p> <p>_____</p> <p>_____</p>

ARC Accepts / Rejects	
	<p><b>3.10</b> Effects on natural heritage</p> <p><i>The following may help you identify any natural heritage features on your site:</i></p> <ul style="list-style-type: none"> <li>• <i>Check the Natural Heritage Database (held by the ARC) – ask ARC staff.</i></li> <li>• <i>Appendix B of the Auckland Regional Policy Statement (ARPS) identifies areas of significant natural heritage values. Volume two of the Plan Maps for the Auckland Regional Plan Coastal Protection Areas, schedule three describes their values.</i></li> <li>• <i>Schedule four of the ARP:C shows areas of significant conservation value as identified by the Ministry of Conservation.</i></li> <li>• <i>Plan change nine of the ARPS and schedule three of the ARP:C identify sites that have geological, landscape or coastal heritage value, including volcanic cones and coastal protection areas.</i></li> <li>• <i>Section 3.2 and 3.3 of chapter three of the PARP:ALW provide a description and management approach for wetland management areas and natural lake management areas respectively.</i></li> <li>• <i>Schedule one of the PARP:ALW identifies significant wetlands which constitute the wetland management areas. Information on the boundaries is available from the ARC's Natural Heritage Information Database. The natural lake management area contains the identified lake and a 50m buffer strip around the lake.</i></li> <li>• <i>Section 3.4 of chapter three of the PARP:ALW provide a description, criteria, and management approach for natural stream management areas.</i></li> <li>• <i>Maps series one of the PARP:ALW identifies wetland and natural lake management areas, and also illustrates natural stream management areas in an indicative manner.</i></li> </ul>
	<p><b>3.10.1</b> Is the take site located in a wetlands management area as identified in schedule one of the PARP:ALW?</p> <p style="text-align: right;"><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p><b>3.10.2</b> In reasonable proximity to the proposed take and water use site, are there any natural heritage features e.g. indigenous vegetation and / or any significant ecological or geological features or features with significant natural heritage and / or conservation values e.g. volcanic cones, wetlands etc on the site and environs.</p> <p style="text-align: right;"><input type="checkbox"/> Yes      <input type="checkbox"/> No</p> <p><b>3.10.3</b> If <b>YES</b>, describe what is present and any adverse effect your take may have.</p> <p>_____</p> <p>_____</p> <p>_____</p>

ARC Accepts / Rejects	
	<p><b>3.11</b> Discuss any adverse effects of the activity on any abstraction point for a registered drinking water supply as required by sections 6, 7 and 8 of the Resource Management (National Environment Standards for Sources of Human Drinking Water) Regulations 2007. <i>(For more detail on catchments and aquifers refer to question 3.15 in Form B9 “Discharge less than or equal to 6m<sup>3</sup>/day of Domestic wastewater onto or into Land”.)</i></p>
	<p><b>3.12</b> Alternative locations and methods</p> <p><i>As part of your AEE, it may be appropriate to consider if there are alternative sources of water or alternative methods of undertaking your activity which may have lesser adverse effects, for instance, taking groundwater or storage of winter runoff in an off-stream dam rather than pumping from a small stream. If your proposed pumping rate is a significant proportion of summer low flow, you should consider pumping water from the stream at a low rate over a longer period of time or into temporary storage (e.g. pond) and then pumping to the areas to be irrigated at a high rate. Alternatively you could alternate your pumping with neighbouring users.</i></p> <p><i>The level of detail required may depend on the scale of activity. If in doubt you should contact the ARC for advice on what sort of information you should provide.</i></p>
	<p><b>3.12.1</b> State any alternative water sources available: <i>(tick appropriate box)</i></p> <p>Rainwater storage <input type="checkbox"/></p> <p>Municipal supply <input type="checkbox"/></p> <p>Groundwater <input type="checkbox"/></p> <p>Water impounded by dam <input type="checkbox"/></p> <p>Re-use of wastewater <input type="checkbox"/></p> <p>Other <i>(specify)</i> _____</p> <p>No other sources <input type="checkbox"/></p>
	<p><b>3.12.2</b> Describe why you have chosen to take water from surface water and not from any of these other water sources.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>3.12.3</b> State any alternative methods of undertaking your activity. Identify whether these are more or less water efficient. If they are more water efficient, explain why you have not chosen the alternative.</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>



ARC Accepts / Rejects	
	<p><b>4.2</b> Can your maximum abstraction rate identified in Q.1.12.1 above be reduced by increasing the length of time over which water is taken?</p> <p><input type="checkbox"/> Yes                      <input type="checkbox"/> No</p> <p>If <b>YES</b>, describe:</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>4.3</b> If the stream is not fenced off from stock and has no riparian vegetation overhanging the stream, can these measures be implemented?</p> <p><input type="checkbox"/> Yes                      <input type="checkbox"/> No</p> <p><b>4.3.1</b> If <b>YES</b>, describe proposed riparian planting plan (extent and species) and fencing (<i>attach a plan if necessary</i>).</p> <p>_____</p> <p>_____</p> <p>_____</p> <p><b>4.3.2</b> <i>Note: Riparian planting and exclusion of stock are useful potential mitigation.</i></p> <p>If <b>NO</b>, describe in detail why not?</p> <p>_____</p> <p>_____</p> <p>_____</p>
	<p><b>4.4</b> Wetlands</p> <p>Are there any wetlands (swamp area) on or adjacent to the stream/dam?</p> <p><input type="checkbox"/> Yes                      <input type="checkbox"/> No</p> <p><b>4.4.1</b> <i>Note: Protection/restoration of wetlands is a useful potential mitigation.</i></p> <p>If <b>YES</b>, describe proposed protection/restoration e.g. fencing, planting and pest control. (<i>Attach a plan if necessary</i>).</p> <p>_____</p> <p>_____</p> <p>_____</p>

ARC Accepts / Rejects	
	<p><b>4.5</b> If there are any stream culverts with drops on the downstream side, can these be lowered to provide for the passage of fish?</p> <p><input type="checkbox"/> Yes                      <input type="checkbox"/> No</p>
	<p><b>4.5.1</b> <i>Note: Remediation of perched culverts is a useful potential mitigation.</i></p> <p>If <b>NO</b>, describe in detail why not, if <b>YES</b>, describe how.</p> <hr/> <hr/> <hr/>
	<p><b>4.6</b> If there are any point source and non-point source discharges on the property in the catchment of the stream, can these be reduced.</p> <p><input type="checkbox"/> Yes                      <input type="checkbox"/> No</p>
	<p><b>4.6.1</b> <i>Note: Reduction in point source and non-point source discharges will improve water quality in the stream and are useful potential mitigation.</i></p> <p>If <b>NO</b>, describe in detail why not?</p> <hr/> <hr/> <hr/>
	<p><b>4.6.2</b> If <b>YES</b>, describe how.</p> <hr/> <hr/> <hr/>
	<p><b>5.0      Consultation</b></p>
	<p><i>Where consultation has taken place with Iwi and/or any interested persons, details of the consultation undertaken, including the views of those consulted and your response to their concerns/issues, must be provided. Copies of any correspondence confirming this consultation should be attached to this form.</i></p> <p>List below those parties consulted, their address and/or phone number, any concerns they have expressed and your response to this. <i>(Attach additional list and/or supporting information where appropriate).</i></p>

ARC Accepts / Rejects		
	<b>5.1</b> Name _____ Postal Address _____ Site Address _____ Their concerns _____ _____ _____ Your response _____ _____ _____	Position _____ _____ _____ _____ _____ _____ Correspondence Attached <input type="checkbox"/>
	<b>5.2</b> Name _____ Postal Address _____ Site Address _____ Their concerns _____ _____ _____ Your response _____ _____ _____	Position _____ _____ _____ _____ _____ _____ Correspondence Attached <input type="checkbox"/>
	<b>5.3</b> Name _____ Postal Address _____ Site Address _____ Their concerns _____ _____ _____ Your response _____ _____ _____	Position _____ _____ _____ _____ _____ _____ Correspondence Attached <input type="checkbox"/>

ARC Accepts / Rejects	<b>6.0. Affected Persons</b>
	<b>6.1</b> If you have identified any persons likely to be adversely affected by this proposal/application fill out the 'Written Approval of Affected Parties' Form.
	<b>6.1.1</b> Signed approval form attached <input type="checkbox"/>
	<b>6.1.2</b> Reasons why you consider they are affected: _____ _____ _____
	<b>6.1.3</b> Signed plans attached <input type="checkbox"/>
	<b>6.2</b> Provide details if anybody refused to give their written approval:  Name _____ Position _____ Postal Address _____ Site Address _____ Their concerns _____
	<b>7.0 Monitoring</b>
	<i>You will be required to monitor your own water use with a water meter and submit records to the ARC. Where the scale of the activity and related effects are significant (e.g. potential for significant reduction in low flow) then monitoring of these effects and the effectiveness of mitigation measures may be appropriate. This may include monitoring flows or undertaking water quality sampling or surveys of aquatic biota, for instance.</i>
	<b>7.1</b> Do you intend monitoring the effects your abstraction may have on other water users and the resource as a whole?  <input type="checkbox"/> Yes <input type="checkbox"/> No  Describe below:  _____ - _____ - _____ -  <input type="checkbox"/> Separate report attached.

ARC Accepts / Rejects	
	<p><b>7.2</b> For water metered water takes, how do you propose to record the information?</p> <p><i>The data obtained from water water meters must be collected and recorded. Often this is done manually, but manual recording (e.g. daily visits to the water meter) is not always convenient to the consent holder, and recording may become sporadic. In addition, errors can occur when data is recorded incorrectly (e.g. numbers are transposed). Dataloggers are an automatic electronic way of obtaining and recording data from certain types of water meters with a pulse output. Depending on the type of water take you are applying for, and the rate and volume of water sought, the ARC may require that you install a datalogger to record details of your taking.</i></p> <p><input type="checkbox"/> Take manual readings at a daily/weekly _____ frequency (<i>specify</i>).</p> <p><input type="checkbox"/> Use a datalogger or telemetry (automated systems).</p> <p><input type="checkbox"/> Other _____ (<i>specify</i>).</p>