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## **Woodstock Quarries Limited**

## Response to Request for Further Information – Canterbury Regional Plans

Date: 11 April 2022

## Notes:

- The take and discharge of water from the quarry pit will continue within permitted limits.
- Future source of water required for aggregate washing, fire fighting, dust control and wetting down of stockpiles will be from the sediment ponds to be constructed as part of the landfill activity.

ltem	Relevant Regional Plan rules	Response/assessment
2.1 Existing quarry LWRP	Land use  5.175 The use of land to excavate material is a permitted activity, provided the following conditions are met:  1. Over the Coastal Confined Gravel Aquifer System, as shown on the Planning Maps:  (a) there is more than 1 m of undisturbed material between the deepest part of the excavation and Aquifer 1; and  (b) if more than 100 m3 of material is excavated, the excavation does not occur within 50 m of any surface waterbody; or  2. Over an unconfined or semi-confined aquifer:  (a) the volume of material excavated is less than 100 m3; or  (b) the volume of material excavated is more than 100 m3 and:	<ul> <li>Land use – 5.175</li> <li>The volume of excavated material is more than 100m³.</li> <li>There is more than 1 metre of undisturbed material between the deepest part of the excavation and the seasonal high water level. The definition of aquifer in the Environment Canterbury Technical Report 'Aquifer Test Guidelines (2nd Edition) Report No. R08/25, Section 6 (page 22)' defines as aquifer as 'saturated, permeable geological unit that is capable of yielding economically significant quantities of water to wells and/or springs'. On-</li> </ul>

Item	Relevant Regional Plan rules	
	(i) there is more than 1 m of undisturbed material between the deepest part of the excavation and the seasonal high water table level; and (ii) the excavation does not occur within 50 m of any surface waterbody.	
	Take water	
	<ul> <li>5.111 The take and use of water from a river, lake or an artificial watercourse is a permitted activity, provided the following conditions are met: <ol> <li>The total take and use per property:</li> <li>is less than the following rates and volumes:</li> <li>Lakes - rate 5 L/s, volume per day 50 m³</li> </ol> </li> </ul>	
	<ul> <li>(b) for rivers where the 7DMALF is unable to be calculated, is at a rate of less than 5L/s and a maximum volume of 10 m3 per day; and</li> <li>2. Fish are prevented from entering the water intake as set out in Schedule 2; and</li> </ul>	
	3. Where the take is from a waterbody with a minimum flow that is set in Sections 6 to 15, the take of water for other than an individual's reasonable domestic and stockwater use ceases when the flow is at or below the minimum flow for that waterbody, as estimated by the Canterbury Regional Council; and	
	<ol> <li>The take is not from any river or part of a river that is subject to a Water Conservation Order; and</li> </ol>	
	5. Where the take is from a water race, irrigation or hydro-electricity canal or storage facility, the abstractor holds a current written agreement with the holder of the resource consents for the taking of water into the water race,	
	canal or storage facility; and 6. The take is not from the Avon River/Ōtākaro or Heathcote River or a wetland or a hāpua.	
	Discharge water	
	<ul> <li>5.98 Any discharge of water or contaminants onto or into land in circumstances where a contaminant may enter groundwater that is not classified by any of the above rules, is a permitted activity, provided the following conditions are met:</li> <li>1. The volume of the discharge does not exceed 10 m3 per day and the application rate does not exceed 10 mm per day; and</li> </ul>	

## Response/assessment

- site investigations have shown this definition is not met.
- The excavation has not occurred within 50 metres of a surface water body.

#### **Permitted**

## Take water – 5.111

The water body located in the quarry area is a result of rain water collecting in the excavation and therefore falls under the definition of artificial lake in the LWRP. There are no rules referring to takes from artificial lakes. Rule 5.111 refers to lake and therefore is most relevant. Assessment against 5.111 is as follows:

- Take has been and continues to be than 50m<sup>3</sup> per day and of less than 5L/s.
- No fish are present.
- 3, 4, 5 and 6 NA.

## **Permitted**

# Discharge water - 5.98

- Discharges of water taken from the pit may have occasionally exceeded 10m³ per day. Discharges to land have dissipated over a wide area, with past application rates observed to not result in saturated ground in the area of discharge. Future discharges will be managed to ensure less than 10m³ per day is taken and application rate does not exceed 10mm per day.
- Discharge was, and will not be, not directly to ground water.

# **Relevant Regional Plan rules** Item 2. The discharge is not directly into groundwater; and 3. The discharge does not result in any overflow or runoff into any surface water body or onto neighbouring site; and 4. The discharge does not, in groundwater, render fresh water unsuitable or unpalatable for consumption by animals or humans: and 5. The discharge does not contain any hazardous substance, hazardous waste or added radioactive isotope: and 6. The discharge does not occur when the soil moisture exceeds field capacity; and 7. The discharge is not from or into contaminated or potentially contaminated land: and 8. The discharge is not within (a) 50 m of a bore used for water abstraction; or (b) within a Community Drinking-water Protection Zone as set out in Schedule 1: and 9. Where the discharge is from the use of live ammunition associated with military training under the Defence Act 1990, conditions 1 to 8 do not apply. 5.99 Any discharge of water or contaminants into surface water or onto or into land in circumstances where it may enter surface water that is not classified by any of the above rules, is a permitted activity, provided the following conditions are met: 1. The discharge is not from or into contaminated or potentially contaminated land: and 2. The discharge is not into a Natural State water body; and 3. The discharge meets the water quality standards in Schedule 5 after reasonable mixing with the receiving waters, in accordance with Schedule 5; and 4. The concentration of total suspended solids in the discharge shall not exceed: (a) 50 g/m3, where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake; or (b) 100 g/m3 where the discharge is to any other river or to an artificial watercourse: and 5. The discharge does not result in more than a 20% change in the rate of flow of the receiving surface water body; and 6. The discharge does not contain any hazardous substance, hazardous waste or added radioactive isotope.

# Response/assessment

- Discharge did not, and will not, result in any overflow or run-off into surface water outside the quarry.
- Occasional minor overflow or run-off into neighbouring site has occurred in the past. This has occurred only when discharge was of higher quantities. Future discharges will be managed to ensure no discharges result in overflow or run-off onto neighbouring sites.
- Discharge has not, and will not, render water unsuitable for animal or human consumption.
- Discharge has not, and will not, contain any of the substances listed in 5.
- Discharge has not, and will not, occur when soil moisture exceeds field capacity.
- Discharge has not, and will not, be to contaminated or potentially contaminated land.
- Discharge has not been, and will not be, within 50m of water bore or within a protection zone.

5.98 – Discharge may not have complied on occasions in the past. Management of future discharges will ensure compliance with permitted standards.

#### 5.99 - Permitted

Assessment of effects in relation to past noncompliances with 5.98:

As shown by on-site investigations, there is no aquifer in the area of the quarry and therefore no aquifer in the area of the discharge of water. The quantity of water discharged also allowed dispersion over land, with no resulting discharge into a natural surface water body. Any adverse effects to groundwater or natural water bodies resulting from the volume of

Item	Relevant Regional Plan rules	Response/assessment
		discharge exceeding the permitted level are therefore less than minor.  Discharges may have occasionally overflowed into the neighbouring site to the south. Overflows have been minor in quantity, of very short duration, very occasional and following a significant distance of overland travel and dispersion. Any adverse effects resulting from this overflow have therefore been less than minor.
2.1 Existing quarry CARP	7.3 The discharge of odour, dust or smoke into air that is not managed by any other rule in this Plan is a permitted activity provided the following conditions are met:  1. The discharge does not cause or is not likely to cause an adverse effect beyond the boundary of the property of origin; and  2. The discharge does not cause an offensive or objectionable effect beyond the boundary of the property of origin when assessed in accordance with Schedule 2.  The matters listed in Schedule 2 are:  1. The frequency of dust events; and  2. The intensity of dust events, as indicated by dust quantity and the degree of effect; and  3. The duration of each dust event; and  4. The offensiveness of the discharge having regard to the nature of the dust, including soiling of materials or structures and any potential health effects; and  5. The location of the dust, having regard to the sensitivity of the receiving environment, including taking into account the relevant zone(s) and provisions in the relevant District Plan.	<ul> <li>Only dust is potentially discharged from the existing quarry site.</li> <li>Dust discharges are minor due to the nature of the rock and product produced.</li> <li>Dust discharges have and do not cause an adverse effect beyond the boundary of the property of origin.</li> <li>Dust discharges do not cause an offensive or objectionable effect beyond the boundary of the property of origin. With regard to the matters listed in Schedule 2: <ol> <li>The frequency of dust discharges beyond the boundary of the quarry site is low.</li> <li>The intensity of dust events from quarry activities is low due to large size of particles and therefore low dust generation with a subsequent less than minor adverse effect. Dust from quarry roads is contained within the large area of the site, with any adverse effects off-site being less than minor.</li> <li>The duration of any dust event is very short term.</li> </ol> </li></ul>

Item	Relevant Regional Plan rules	Response/assessment
		<ul> <li>4. There is no offensiveness associated with dust discharges.</li> <li>5. The site is remote and large with the surrounding environment being of low sensitivity.</li> </ul> Permitted
2.2		
(f) Existing quarry	Please confirm whether the diversion of groundwater into the open excavation, as well as the diversion of run-on water via perimeter clean water diversion system, meets any relevant permitted activity rules in a regional plan, or whether this activity requires a resource consent (water permit).  5.114 The taking and using of less than 5 L/s and more than 10 m3 but less than 100 m3 per property per day of groundwater on a property more than 20ha in area is a permitted activity, provided the following conditions are complied with:  1. The bore is located more than 20 m from the property boundary or any surface waterbody.	There is no 'diversion' of ground water into the open excavation as the area excavated does not penetrate any aquifer, as defined in the Environment Canterbury Technical Report 'Aquifer Test Guidelines (2 <sup>nd</sup> Edition) Report No. R08/25, Section 6 (page 22)' and determined by on-site investigations. The pit fills by rainwater alone. There are also currently no clean water diversion systems in place for run-on water. No rules are relevant, including general rule 5.6, as there is no use, dam or diversion as defined in the LWRP.  If it is considered there is a take of ground water then rule 5.114 is relevant, in which case the rate and volume is within that set by the permitted standard.
		Permitted
g	Please confirm whether the taking of accumulated water from the open excavation meets any relevant permitted activity rules in a regional plan, or whether this activity requires a resource consent (water permit).	Take of water for use in quarry operations:  The water body located in the quarry area is a result of rain water collecting in the excavation and therefore falls under the definition of artificial lake in
	Take of water for use in quarry operations:	the LWRP. There are no rules referring to takes from
	The water contained within the pit in the quarry area is an artificial lake, as defined by the relevant definition in the LWRP.	artificial lakes. Rule 5.111 refers to lake and therefore is most relevant. Assessment against 5.111 is as follows:
	Artificial lake means:  a lake created by human action. It includes any lake created as a result of damming a river, constructing an impoundment on land, or excavating land, but	<ul> <li>Take was less than 50m³ per day and of less than 5L/s.</li> <li>No fish are present.</li> <li>3, 4, 5 and 6 – NA.</li> </ul>

Item	Relevant Regional Plan rules	Response/assessment
	excludes detention and retention basins for stormwater, for dewatering purposes, factory waste and washdown water and oxidation ponds and other artificial water bodies used to treat human or animal waste.	Permitted
	There are no take rules relating to artificial lakes, however Rule 5.111 refers to lakes and is therefore considered relevant.	
	<ul> <li>5.111 The take and use of water from a river, lake or an artificial watercourse is a permitted activity, provided the following conditions are met:</li> <li>1. The total take and use per property: <ul> <li>(a) is less than the following rates and volumes:</li> <li>Lakes - rate 5 L/s, volume per day 50 m³</li> </ul> </li> </ul>	
	or (b) for rivers where the 7DMALF is unable to be calculated, is at a rate of less than 5L/s and a maximum volume of 10 m3 per day; and 2. Fish are prevented from entering the water intake as set out in Schedule 2; and 3. Where the take is from a waterbody with a minimum flow that is set in	
	Sections 6 to 15, the take of water for other than an individual's reasonable domestic and stockwater use ceases when the flow is at or below the minimum flow for that waterbody, as estimated by the Canterbury Regional Council; and 4. The take is not from any river or part of a river that is subject to a Water Conservation Order; and	
	<ul> <li>5. Where the take is from a water race, irrigation or hydro-electricity canal or storage facility, the abstractor holds a current written agreement with the holder of the resource consents for the taking of water into the water race, canal or storage facility; and</li> <li>6. The take is not from the Avon River/Ōtākaro or Heathcote River or a wetland or a hāpua.</li> </ul>	Take of water for dewatering of the pit:
	Take of water for dewatering of the pit:	Take only occurs as required for dewatering
	5.119 The taking of water from groundwater for the purpose of dewatering for carrying out excavation, construction, maintenance and geotechnical testing and the associated use and discharge of that water is a permitted activity, provided the following conditions are met:	purposes and has not exceeded 6 months in duration.  2. Not a contaminated site.  3. No evidence that groundwater is present as an aquifer in the pit area as defined in the Environment Canterbury Technical Report

Item	Relevant Regional Plan rules	Response/assessment
	<ol> <li>The take continues only for the time required to carry out the work but the take shall not last for a period exceeding 6 months; and</li> <li>The take or discharge is not from, into, or onto contaminated or potentially contaminated land; and</li> <li>The take does not lower the groundwater level more than 8 m below the ground level of the site or cause subsidence of any other site; and</li> <li>The take does not have a moderate, high or direct stream depletion effect on a surface waterbody, determined in accordance with Schedule 9, unless the abstracted groundwater is being discharged to the surface waterbody to which it is hydraulically connected; and</li> <li>An assessment of interference effects, undertaken in accordance with Schedule 12, does not show that any community, group or private drinkingwater supply bore will be prevented from taking water; and</li> <li>At the point and time of any discharge to surface water, the rate of flow in the river or artificial watercourse is at least five times the rate of the discharge; and</li> <li>The concentration of total suspended solids in any discharge to a surface waterbody does not exceed:         <ul> <li>500/m3 where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake or wetland; or</li> <li>100 g/m³ where the discharge is to any other river or to an artificial watercourse; and</li> </ul> </li> <li>The discharge after reasonable mixing with the receiving waterbody meets the visual clarity standards in Schedule 5; and</li> <li>The point of discharge is not within a Community Drinking-water Protection Zone as set out in Schedule 1.</li> </ol>	<ul> <li>'Aquifer Test Guidelines (2<sup>nd</sup> Edition) Report No. R08/25, Section 6 (page 22)' and therefore groundwater level cannot be lowered by more than 8 metres.</li> <li>4. No effect on stream depletion due to no aquifer being present and therefore no connection to any surface water body.</li> <li>5. No water supply bores in the vicinity of the take and therefore no effect on well takes.</li> <li>6. No direct discharge to surface water.</li> <li>7. No discharge to surface water body.</li> <li>8. NA</li> <li>9. Not within a Community Drinking water Protection Zone.</li> </ul>
h	Please confirm whether the discharge of water taken from the open excavation meets any relevant permitted activity rules in a regional plan, or whether this activity requires a resource consent (discharge permit).  5.119 The taking of water from groundwater for the purpose of dewatering for carrying out excavation, construction, maintenance and geotechnical testing and the associated use and discharge of that water is a permitted activity, provided the following conditions are met:  1. The take continues only for the time required to carry out the work but the take shall not last for a period exceeding 6 months; and	1. NA 2. Not a contaminated site. 3. NA 4. NA 5. NA 6. No direct discharge to surface water. 7. No discharge to surface water body. 8. NA 9. Not within a Community Drinking water Protection Zone.
		Permitted discharge.

Item	Relevant Regional Plan rules	Response/assessment
	<ol> <li>The take or discharge is not from, into, or onto contaminated or potentially contaminated land; and</li> <li>The take does not lower the groundwater level more than 8 m below the ground level of the site or cause subsidence of any other site; and</li> <li>The take does not have a moderate, high or direct stream depletion effect on a surface waterbody, determined in accordance with Schedule 9, unless the abstracted groundwater is being discharged to the surface waterbody to which it is hydraulically connected; and</li> <li>An assessment of interference effects, undertaken in accordance with Schedule 12, does not show that any community, group or private drinkingwater supply bore will be prevented from taking water; and</li> <li>At the point and time of any discharge to surface water, the rate of flow in the river or artificial watercourse is at least five times the rate of the discharge; and</li> <li>The concentration of total suspended solids in any discharge to a surface waterbody does not exceed:         <ul> <li>(a) 50g/m3 where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake or wetland; or</li> <li>(b) 100 g/m³ where the discharge is to any other river or to an artificial watercourse; and</li> </ul> </li> <li>The discharge after reasonable mixing with the receiving waterbody meets the visual clarity standards in Schedule 5; and</li> <li>The point of discharge is not within a Community Drinking-water Protection Zone as set out in Schedule 1.</li> </ol>	
CARP	<ul> <li>The application is for expansion of the existing hard rock quarry that has been operating at the site for some time. Quarry operations usually handle (i.e. extraction, quarrying, mining, processing, screening, conveying, blasting, or crushing) and store bulk solid materials (rock, fines, etc.). The application has focused on the discharges of dust and particulates from the proposed landfilling activities; however, no assessments were provided against the rules in the Canterbury Air Regional Plan relevant to quarrying activities (also see questions in Section 7 below).</li> <li>(a) In addition to Question 1.1 above, please confirm compliance with Rules 7.35 (handling of bulk solid materials) and 7.36 (storing of bulk solid materials) of the CARP.</li> <li>(b) Please also confirm if blasting is carried out at the site and if so, please provide further details on frequency of that activity.</li> </ul>	Assessment in the application of the CARP resulted in the activity being regarded as a discretionary activity under Rule 7.63 due to the landfill operation. Assessment of effects in paragraph 122 assessed dust discharges. Rules 7.35 and 7.36 were considered to be complied with and therefore no specific assessment was provided in the application. As requested, assessment of these rules is as follows:  Rule 7.35  1. The matters listed in Schedule 2 are:  1. The frequency of dust events; and

#### **Relevant Regional Plan rules** Response/assessment Item 7.35 The discharge of contaminants into air from the handling of bulk solid materials is a 2. The intensity of dust events, as indicated by dust permitted activity provided the following conditions are met: quantity and the degree of effect; and 1. The discharge of dust does not cause an offensive or objectionable effect 3. The duration of each dust event: and beyond the boundary of the property of origin, when assessed in accordance 4. The offensiveness of the discharge having regard with Schedule 2; and to the nature of the dust, including soiling of 2. The handling occurs indoors, or where the handling occurs outdoors the rate materials or structures and any potential health of handling does not exceed 100t per hour; or effects: and 3. Where handling occurs outdoors on less than 21 days per calendar year, the 5. The location of the dust, having regard to the rate of handling does not exceed 250t per hour; and sensitivity of the receiving environment, including 4. Where the handling occurs outdoors and the rate of handling exceeds 20t per taking into account the relevant zone(s) and hour, a dust management plan is prepared in accordance with Schedule 2 provisions in the relevant District Plan. and implemented by the person responsible for the discharge into air; and 5. The dust management plan is supplied to the CRC on request; and With regard to the matters listed in Schedule 2: 6. The discharge does not occur within 200m of a sensitive activity, wahi tapu, wāhi taonga or place of significance to Ngāi Tahu that is identified in an Iwi 1. The frequency of dust discharges beyond the Management Plan; and boundary of the quarry site is low. 2. The intensity of dust events is low due to large 7. Notwithstanding condition 6, where the discharge is from production blasting at a quarry site the discharge does not occur within 500m of a sensitive size of particles, with minor quantities and low activity wāhi tapu, wāhi taonga or a place of significance to Ngāi Tahu that is density of dust being generated infrequently. identified in an Iwi Management Plan. 3. The duration of any dust event is very short term. 4. There is no offensiveness associated with dust 7.36 The discharge of contaminants into air from the outdoor storage of bulk solid discharges. materials is a permitted activity provided the following conditions are met: 5. The site is remote with the surrounding 1. The discharge of dust does not cause an offensive or objectionable effect environment being of low sensitivity. beyond the boundary of the property of origin, when assessed in accordance with Schedule 2: and 2. NA 2. The amount of material stored does not exceed 1000t when it has an average 3. NA particle size of less than 3.5mm; and 4. Dust Management Plan will be prepared. 5. Dust Management Plan will be provided to CRC 3. Where the storage exceeds 200t, a dust management plan is prepared in accordance with Schedule 2 and implemented by the person responsible for on request. the discharge into air: and 6. None of the matters/items listed are known to 4. The dust management plan is supplied to the CRC on request; and exist or are identified in the Iwi Management Plan 5. The discharge does not occur within 100m of a sensitive activity, wāhi tapu, within 200m of the quarry site. wāhi taonga or place of significance to Ngāi Tahu that is identified in an Iwi 7. None of the matters/items are known to exist or Management Plan. are identified in the Iwi Management Plan within 500m of the site. Rule 7.36

ltem	Relevant Regional Plan rules	Response/assessment
3.11	The AEE states that any groundwater entering the area of the quarry/pit not utilised for landfill purposes will be discharged to the swale and stormwater ponds. Further, if groundwater in the underdrainage system is found to be contaminated by landfill leachate, the contaminated ground water is proposed to be diverted to the leachate system and disposed of accordingly.  (a) Please confirm what groundwater will be used for in the landfill operation and confirm whether the intended uses will be consumptive in nature.  (b) Please confirm if and how a liner leak will be remediated to ensure that groundwater from the underdrainage system does not have to be diverted to the leachate system on a permanent basis.  If the groundwater use is consumptive for any of the above reasons, please provide an assessment of this activity against the relevant regional plan provisions. If a resource consent is required, please provide an assessment of actual and potential effects of the consumptive groundwater take.	<ol> <li>Dust will not cause objectionable or offensive effects beyond the boundary of the site for the reasons assessed above for 7.35.</li> <li>Particle size of material stored on the site is larger than 3.5mm.</li> <li>Storage will exceed 200 tonnes. Dust Management Plan will be prepare and implemented.</li> <li>Dust Management Plan will be provided to CRC.</li> <li>None of the matters/items listed are known to exist within 100m of the quarry site.</li> <li>Groundwater will not be used in the landfill and is not considered to be present in the existing or proposed excavated quarry area, as confirmed by on-site investigations and defined in the Environment Canterbury Technical Report 'Aquifer Test Guidelines (2<sup>nd</sup> Edition) Report No. R08/25, Section 6 (page 22)'. If sub-liner flows are present and become contaminated with leachate, these flows will be collected within the leachate system and discharged back into the landfill to maintain moisture levels in the waste material. This use will not be consumptive as the leachate system is a closed circuit. Leachate will only be disposed of off-site if there is more quantity than can be used within the land fill. However, in any event the quantity of 'ground water' (sub-liner flows) taken into the leachate system in the case of contamination is expected to be very small and within the permitted limits of Rule 5.114 (5L/s and 100m³ per day).</li> </ol>

## Consent matter to be added to application:

# Take of water for the purposes of aggregate washing, fire-fighting, dust control and wetting down of stockpiles (Water permit S14 RMA)

- Sediment ponds are part of the artificial watercourse constructed to collect and convey stormwater and sub-liner drainage water from the quarry and landfill.
- The relevant rule is 5.111:

Rule no.	Rule standards	Assessment
5.111	The take and use of water from a river, lake or an artificial watercourse is a permitted activity, provided the following conditions are met:  1. The total take and use per property:  (a) is less than the following rates and volumes:  • Lakes - rate 5 L/s, volume per day 50 m³  or  (b) for rivers where the 7DMALF is unable to be calculated, is at a rate of less than 5L/s and a maximum volume of 10 m3 per day; and  2. Fish are prevented from entering the water intake as set out in Schedule 2; and  3. Where the take is from a waterbody with a minimum flow that is set in Sections 6 to 15, the take of water for other than an individual's reasonable domestic and stockwater use ceases when the flow is at or below the minimum flow for that waterbody, as estimated by the Canterbury Regional Council; and  4. The take is not from any river or part of a river that is subject to a Water Conservation Order; and  5. Where the take is from a water race, irrigation or hydro-electricity canal or storage facility, the abstractor holds a current written agreement with the holder of the resource consents for the taking of water into the water race, canal or storage facility; and  6. The take is not from the Avon River/Ōtākaro or Heathcote River or a wetland or a hāpua.	<ol> <li>Total daily take will be a maximum of 200m³ per day, with a flow rate not exceeding 5L/s.</li> <li>No fish will be present in the sediment ponds.</li> <li>NA</li> <li>NA</li> <li>NA</li> <li>NA</li> <li>Discretionary Rule 5.6</li> </ol>

#### **Assessment of Effects:**

- The source of water is from rain falling within or on the area immediately surrounding the quarry/landfill area and conveyed to the sediment ponds via constructed drains.
- Use of the water taken from the sediment ponds will be entirely within the site. Water used for aggregate washing will return to the drainage channels and sediment ponds. Water used for fire fighting will also return to the sediment ponds via drainage channels if used in the quarry/landfill area. Water used for dust control or wetting down stockpiles will be removed from the drainage system, but will nevertheless return to the wider hydrological system within the site.
- The volume of the sediment ponds will be 20,000m<sup>3</sup>, with the maximum quantity to be taken per day being 1% of the total storage volume. The uses for which water will be taken are all very occasional activities, meaning that the sediment ponds will retain a significant portion of the maximum storage volume at all times.
- The drainage system associated with the quarry/landfill is a closed system, with discharges from the ponds being to land some distance from the nearest surface water body containing fish. No fish will therefore be present in the drainage/sediment pond system and no adverse effects on fish or aquatic habitats will result from the take.
- Overall, adverse effects associated with the taking of water as proposed from the proposed sediment ponds for the purposes of aggregate washing, fire-fighting, dust control and wetting down of stockpiles are considered to be less than minor.