

Appendix C: Detailed Planning Rule Assessment

Assessment of Relevant Regional Planning Rules for Construction and Installation of the BCI Akarana Storage Pond

The following provides the assessment of the relevant planning rules considered for the proposed construction of the BCI Akarana Storage pond and the associated ancillary activities. The activity has been assessed against the relevant Regional Planning Rules (Sections 2.0 to 4.0) and District Planning Rules (Section 5.0). For a summary table of the relevant regional and district planning rules, and their final activity status classification, the reader is directed to Section 7.0 of this regional planning rule assessment.

1.0 Resource Management Act 1991 (RMA)

1.1 Land use activities for the installation of the storage pond

The installation and use of the storage pond system is considered a “use of land” activity. Section 2 of the RMA provides the definition of “use” as it is referred to in Section 9.

- i) *“alter, demolish, erect, extend, place, reconstruct, remove, or use a structure or part of a structure in, on, under, or over land;*
- ii) *drill, excavate, or tunnel land or disturb land in a similar way;*
- iii) *damage, destroy, or disturb the habitats of plants or animals in, on, or under land;*
- iv) *deposit a substance in, on, or under land;*
- v) *any other use of land”*

The proposed activity involves the placing a structure in and over land, excavating land, and depositing a substance on land, thereby meeting the definition of “using” land.

Section 9(2) of the RMA states that:

“No person may use land in a manner that contravenes a regional rule unless the use

(a) is expressly allowed by a resource consent; or

(b) is an activity allowed by section 20A.”

The proposed works involve the excavation of land and depositing a substance (HDPE geomembrane liner, loess/silt materials, fluvioglacial outwash materials, riprap and AP20) on land. The proposed land use activity may not contravene a regional plan unless allowed for by resource consent. The relevant regional plan to consider is the Land and Water Regional Plan (LWRP), and any relevant proposed plan changes to the LWRP.

1.2 Diverting of drainage water and site dewatering

Section 14(2) of the RMA states that no person may divert water unless it is allowed by subsection (3). Section 14(3) states that a person is not prohibited from diverting water if it is ***“expressly allowed by a national environmental standard, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one), or a resource consent.”***

The proposal involves the potential diversion of groundwater (dewatering) during construction, and the diversion of surface runoff during construction. It is noted that there are no national environmental standards which would expressly allow the diversion.

1.3 Damming of water

Section 14(2) of the RMA states that no person may dam water, unless it is ***“expressly allowed by a national environmental standard, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one), or a resource consent.”*** The proposal involves storing (damming) water in a large storage pond.

1.4 Discharge of stormwater

Section 15(1) of the RMA states that:

“No person may discharge any

(a) contaminant or water into water; or

(b) contaminant onto or into land in circumstances which may result in that contaminant (or any other contaminant emanating as a result of natural processes from that contaminant) entering water;

unless the discharge is expressly allowed by a national environmental standard or other regulations, a rule in a regional plan as well as a rule in a proposed regional plan for the same region (if there is one), or a resource consent.”

As the proposed works will involve dewatering and the discharge of construction phase stormwater onto land, and the construction activity is located in close proximity to the Rangitata Diversion Race, the potential discharge of contaminants must be authorised by a rule in a regional plan (LWRP) or by resource consent. As above, there is no relevant national environmental standard allowing the discharge.

1.5 Discharge of fugitive dust or emissions to air

Section 15(2A) of the RMA states that:

“No person may discharge a contaminant into the air, or into or onto land, from a place or any other source, whether moveable or not, in a manner that contravenes a regional rule unless the discharge

(a) is expressly allowed by a national environmental standard or other regulations;
or

(b) is expressly allowed by a resource consent; or”

Undertaking earthworks (excavation and deposition of land material) has the potential to generate fugitive dust, and therefore consideration of the rules under the operative plan Chapter 3 of the Natural Resource Regional Plan (NRRP) and the proposed Canterbury Regional Air Plan (pCARP).

1.6 Summary of RMA

The proposal involves a number of activities must either be expressly authorised by a national environmental standard or a rule in a regional plan. With respect to this specific proposal, there are no national environmental standards which expressly authorise the activities, and therefore the consideration of the regional rules is required.

The following operative and proposed regional plans are relevant to the proposal:

- ✧ Canterbury Land and Water Regional Plan (and proposed plan changes)

- Land use activities (including excavation)
- Discharges to land and water
- Damming and use of land for storage
- ✧ Canterbury Natural Resources Regional Plan
 - Damming and use of land for storage
 - Discharges to air
- ✧ Proposed Canterbury Regional Air Plan
 - Discharges to air

The following sections consider the relevant rules contained within those plans to assess compliance with the conditions of the rules, and to determine the activity status classification.

2.0 Land and Water Regional Plan

The Canterbury Land and Water Regional Plan (LWRP) became partly operative on 1 September 2015. The proposed activities have been assessed against the relevant rules of the LWRP.

2.1 Land use activities

2.1.1 Excavation

Rule 5.175 classes the use of land to excavate material as a permitted activity, provided the following conditions are met:

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:*
 - 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.*

As per LWRP planning maps B-056 and B-064, the proposed pond is located over an unconfined or semi-confined aquifer. As discussed in the main body of the report (Section 4.2) bore K36/0265, located at the eastern edge of the site, showed depths to groundwater greater than 8.7 m bgl. The seasonal high water table near this bore is approximated to be 8.7 m bgl (331.9 m RL), although its value is uncertain.

Piezometric contour data from the ECan online GIS database indicates groundwater levels are highest at the western edge of the site, approximately 336 m RL. Excavations in this area will extend to a depth of 333.4 m RL, and therefore groundwater may be encountered here. In addition, excavations will occur within 50 m of the Rangitata Diversion Race. Therefore Condition 2(b) is not met.

As per Rule 5.176, the use of land to excavate material that does not comply with one or more of the conditions of Rule 5.175 is a **restricted discretionary** activity.

2.1.2 Deposition

Rule 5.177 specifies that use of land for the deposition of more than 50 m³ of material in any consecutive 12 month period onto land which is excavated to a depth in excess of 5 m below the natural land surface and is located over an unconfined or semi-confined aquifer, where the seasonal high water table is less than 5 m below the deepest point in the excavation is a controlled activity, provided all conditions are met.

The deposited material will consist of the excavated land material (fluvioglacial outwash and loess/silt materials), HDPE geomembrane liner, and imported clean engineered materials (rock riprap and AP20). Condition 1 is thereby satisfied, which specifies the deposited materials are cleanfill only. Prior to excavation, vegetative matter will be cleared from the land surface, and therefore the volume of vegetative matter in any cubic metre of material deposited is expected to not exceed 3%, meeting the requirements of Condition 2.

As discussed above under Rule 5.175, piezometric contour data from the ECan online GIS database suggests groundwater levels of approximately 336 m RL at the western edge of the site, where excavations will extend to 333.4 m RL. Condition 3 may therefore not be met, which requires that material is not deposited into groundwater.

Condition 4 specifies that cured asphalt is placed in the land at least 1 m above the highest groundwater level expected at the site; cured asphalt shall not be used, and as such Condition 4 is met. The site is not listed as an archaeological site, hence Condition 5 is expected to be met.

Lastly, Condition 6 requires that a management plan is prepared in accordance with Section 8.1 and Appendix B of “A Guide to the Management of Cleanfills”, Ministry for the Environment, January 2002. A management plan in accordance with Condition 6 will be prepared for the site.

As all Conditions cannot be met, the use of land for deposition is classified as a **controlled** activity.

2.1.3 Storage of hazardous substances

During the construction of the Akarana pond, diesel fuel will be stored on site in portable containers for the purpose of refuelling vehicles and stationary screening plant. Rule 5.179 states that the use of land for the storage of portable containers of a hazardous substance listed under Part A of Schedule 4 is a permitted activity, provided all conditions are met.

Diesel is a flammable liquid and is considered a hazardous substance, and therefore Rule 5.179 is applicable. Condition 1 requires that the substance is approved under the Hazardous Substances and New Organisms Act 1996 (HSNO), and the storage and use of the substance adheres with all conditions of the approval. Diesel will only be stored in containers that have a valid test certificate under the HSNO, and therefore Condition 1 is expected to be met.

Condition 2 states that the container is not located within (a) 20 m of a surface water body or a bore, and (b) a Group or Community Drinking-water Protection Zone. While the RDR is

adjacent to the north-western border of the site, portable containers will be kept more than 20 m away from the RDR as well as any groundwater bores. Furthermore, there is no Group of Community-water Protection Zone on or in the vicinity of the site. As such, it is expected that Condition 2 will be met.

As both Conditions 1 and 2 are met, the use of land for the storage of diesel fuel in a portable container is classified as a **permitted** activity.

2.2 Site dewatering

As described in the report, there is the potential for some groundwater to be encountered during excavation works, and site dewatering may therefore be required.

Rule 5.119 states that taking of water from groundwater for the purpose of de-watering for carrying out excavation, construction, maintenance and geotechnical testing and the associated use and discharge of that water is a permitted activity, provided all conditions are met.

Condition 1 requires that the take continue only for the time needed to complete the works, however will not last for a period longer than 6 months. The Applicant anticipates that the duration of the works, from the commencement of works to the commissioning of the pond, will be on the order of four to six months. As such, it is expected that Condition 1 will be met.

As per Section 3.2 of the AEE, the site is not listed as a HAIL site on ECan's Listed Land Use Register (LLUR), and no Schedule 3 hazardous industries and activities are known to have occurred on the site. However, the Preliminary Site Investigation (Appendix I) found a historical HAIL activity has occurred within the footprint of the proposed pond, namely waste disposal to land (HAIL reference G5). Therefore, Condition 2 cannot be met. It is noted that an Accidental Discovery Protocol has been prepared (Appendix I) should any waste materials be encountered. The Protocol provides measures for the appropriate handling and disposal of any encountered waste.

Condition 3 states 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. As discussed in Section 4.2.1 and 5.3 of the AEE, land subsidence is considered to be very low risk. Bores nearby the eastern edge of the proposed pond recorded groundwater levels of at least 8.5 m bgl for the majority of the time. Piezometric contour data from the ECan GIS database suggests the highest groundwater levels are at the western edge of the pond, with a level of 2 m bgl (336 m RL). Excavations will extend to 333.4 m RL in this area, and therefore if required, site dewatering will not require lowering groundwater levels by more than 8 m bgl. As such Condition 3 is satisfied.

Condition 4 states the take does not have a moderate, high or direct stream depletion effect on a surface water body unless the abstracted groundwater is being discharged to the surface water body to which it is hydraulically connected. As described above, site dewatering may be required at the western edge of the pond, although it is not expected to have a high or direct stream depletion effect on the RDR. Condition 4 is therefore expected to be met.

Condition 5 states that the dewatering activity must not prevent any community, group or private drinking-water supply bore from taking water. A review of the ECan GIS database found there were no community, group or private-drinking water supply bores within 2 km of the site. As such, Condition 5 is expected to be met.

Condition 6 specifies that at the point and time of discharge to surface water, the rate of flow in the artificial watercourse is at least five times the rate of discharge. Water from any site dewatering will be discharged to land, and therefore Condition 6 is not relevant.

Condition 7 requires that the concentration of suspended solids in any discharge to a surface waterbody does not exceed 100 g/m^3 . While sediment and erosion control measures will be in place during construction of the pond, the water from construction dewatering will be discharged to land, and therefore this condition is not relevant.

There are no Group or Community Drinking-water Protection Zones within 2 km of the site and the discharge will not occur in such a drinking-water protection zone. Therefore Condition 8 will be met.

As Condition 3 is not met, the taking of groundwater and the associated discharge of this water for site dewatering is classified as a **restricted discretionary** activity as per Rule 5.120.

2.3 Damming of water

Rule 5.154 states that the use of land to store water including any associated damming or impounding of water outside the bed of a river or natural lake is a permitted activity, provided the following conditions are met:

1. *For the damming or impounding of water outside of the bed of a river or a natural lake:*
 - a. *the volume of water impounded is less than $20,000 \text{ m}^3$; or*
 - b. *the maximum depth of water is less than 3 m; and*
 - c. *if the volume of water impounded is greater than $1,000 \text{ m}^3$, the design and construction of the dam is certified by a Recognised Engineer; and*
 - d. *the land is not contaminated or potentially contaminated.*

The volume of water stored to be stored is approximately 1.6 million m^3 , with a maximum depth of 4.55 m. Therefore, Condition 1 (a) and (b) are not met. The construction of the dam will be certified by a suitably certified Engineer, and therefore Condition 1 (c) will be met. As per the Preliminary Site Investigation, a historic HAIL activity has been identified within the proposed pond footprint, namely waste disposal to land (HAIL reference G5). As such Condition 1 (d) is not met.

As per Rule 5.155, the use of land to store water, including any associated damming of water outside the bed of a river or natural lake that does not meet the conditions of Rule 5.154 is a discretionary activity, provided the following conditions are met:

1. The damming of water does not result in downstream river flows less than any minimum flow limit set in Sections 6-15 or, where applicable, the default rules on minimum flow limits in Rule 5.123(2); and
2. Any new dam is not located in a river listed as an high naturalness waterbody in Sections 6 to 15 or in the mainstem of any river; and
3. The damming does not prevent water being taken by any domestic or stock water supply, or reduce the reliability of supply of any existing legally authorised water take.

The proposed storage pond is not located in a river, and therefore Condition 2 is met. The Applicant already holds a permit for the take and use of water, and therefore Conditions 1 and 3 are not relevant. As such, the damming and use of land to store water is classified as a **discretionary** activity.

2.4 Discharges

2.4.1 Seepage water

The proposed storage pond will contain a minimum 1.0 m thick loess/silts liner on the pond invert level, and as such, there is the potential for water to seep through the base of the pond and into the underlying land. While it is unlikely that contaminants would be discharged to groundwater via seepage, there is the potential for this to occur should there be a spill upstream of the race for example.

Rule 5.98 states that the discharge of water or contaminants onto or into land where a contaminant may enter groundwater is a permitted activity, provided all conditions are met.

Condition 1 requires that the volume of discharge does not exceed 10 m³ per day and the application rate does not exceed 10 mm per day. Given the large scale of the storage pond (maximum storage volume of 1.6 million m³), it is likely that seepage could exceed 10 m³ per day. Therefore Condition 1 is not met.

Condition 2 specifies that the discharge is not directly to groundwater. Water will seep through the bottom of the pond and infiltrate through the underlying land, and will not discharge directly to groundwater. As such, Condition 2 is met.

The discharge is not expected to result in any overflow or runoff into a surface water body or neighbouring site, nor is it expected to render fresh water unsuitable or unpalatable for consumption by animals or humans. Conditions 3 and 4 and therefore expected to be met.

Condition 5 requires that the discharge does not contain any hazardous substance, hazardous waste or added radioactive isotope, and Condition 7 that discharge is not from or into contaminated or potentially contaminated land. As per the PSI, a historic HAIL activity occurred on the site, namely waste disposal to land (HAIL reference G5) at two locations, comprising of general farm waste, including dead stock and general household waste. Should any waste materials be encountered during the excavation works, these materials will be characterised, disposed off at a suitable disposal facility or reburied as per the Accidental Discovery Protocol. As such, any potential waste materials from the historic waste disposal will not be able to leach to groundwater, as they will have been removed and suitably disposed of during the construction activity. Therefore, Condition 5 is expected to be met, however Condition 7 is not met given the historic HAIL classification.

Condition 6 specifies that the discharge does not occur when the soil moisture exceeds field capacity. This condition is intended to apply to surface discharges to land rather than seepage, and is not relevant. The seepage from the pond would be expected to occur throughout the year, and any seepage would be inhibited by higher groundwater levels. No runoff will occur (the main concern with field capacity) as the water will be contained within the pond embankments.

There are no groundwater bores within 2 km of the site that are used for water abstraction, and similarly there are Group or Community Drinking-water Protection Zones at the site. Condition 8 is therefore met.

As not all of the conditions can be met, the discharge of water or contaminants onto or into land where a contaminant may enter groundwater is classified a **discretionary** activity as per Rule 5.100.

2.4.2 Discharge of construction-phase stormwater

Rule 5.96 classifies the discharge of stormwater onto or into land where contaminants may enter groundwater is a permitted activity, provided the following conditions are met:

2. The discharge is not into a reticulated stormwater system, and
 - (a) The discharge is not from, into or onto contaminated or potentially contaminated land; and
 - (b) The discharge:
 - i) does not cause stormwater from up to and including a 24 hour duration 2% Annual Exceedance Probability rainfall event to enter any other property; and
 - ii) does not result in the ponding of stormwater on the ground for more than 48 hours, unless part of the stormwater treatment system; and
 - iii) is located at least 1 m above the seasonal high water table that can be reasonably inferred for the site at the time the discharge system is constructed; and
 - iv) is only from residentially zoned land.

Condition 2 (a) requires that the discharge is not from, into or onto contaminated or potentially contaminated land. As discussed above, a historic HAIL activity has occurred on the site (waste disposal to land - HAIL reference G5). As such Condition 2 (a) is not met.

Construction stormwater will be contained within the excavation area, and therefore stormwater from up to and including a 24 hour duration 2% Annual Exceedance Probability rainfall is not expected to enter any other property, and based on the strata, any stormwater on the ground is not expected to pond for more than 48 hours. Conditions (b)(i) and (b)(ii) are expected to be met.

Any potential runoff that is generated will be contained within the excavation area and infiltrate through the underlying soils, which are generally well-drained soils. As discussed under Rule 5.199, groundwater levels may be 336 m RL at the western corner of the pond, where excavations will extend to 333.4 m RL. Therefore, there may be less than 1 m between the base of the discharge system and the seasonal high water table and Condition (b)(iii) may not be met.

As per planning Map R39 of the Ashburton District Plan, the site is located in zone Rural B. Requirements (iv) is also not met.

As Condition 2 cannot be met, the discharge of stormwater into onto or into land in circumstances where a contaminant may enter water is classified as a **discretionary** activity as per Rule 5.97.

2.5 Subregional Rules – Section 13 Ashburton

In addition to the region-wide Rules discussed above, Sections 6 to 15 of the LWRP contains subregional rules. Subregional Rules for the Ashburton District are provided in Section 13, however none of these are relevant to the proposed works.

2.6 Proposed Variation 2 to the Land and Water Regional Plan

This section identifies whether any of the regional planning rules in proposed Variation 2 to the LWRP are relevant to the proposed activities. The proposed Variation 2 was notified on 13 February 2016.

No changes to region-wide Rules that are relevant to this application were made in proposed Variation 2. The majority of additions and amendments made in proposed Variation 2 relate to the Hinds/Hekeao Plains Area, and none of these are relevant to the proposed activity.

2.7 Proposed Plan Change 4 to the Land and Water Regional Plan

This section identifies whether any of the rules identified above have changed in the proposed Plan Change 4 to the LWRP. PC4 was publically notified on 30 July 2016, and must be considered when assessing the activity status.

2.7.1 Land use activities

2.7.1.1 Excavation

Rule 5.175 has not been amended in the proposed Plan Change 4, and Rule 5.176 remains the same apart from a minor change in wording. The outcome is unchanged, and as per Rule 5.176, the use of land to excavate material that does not comply with one or more of the conditions of Rule 5.175 is a **restricted discretionary** activity.

2.7.1.2 Deposition

Rule 5.177 remains unchanged in Plan Change 4 to the LWRP, apart from a minor change in wording. The use of land for deposition remains classified as a **controlled** activity.

2.7.1.3 Storage of hazardous substances

Rule 5.179 has not been amended in Plan Change 4 to the LWRP, and as such the use of land to store diesel fuel in portable containers remains a **permitted** activity.

2.7.2 Site dewatering

Rule 5.119, relating to the taking and discharge from groundwater for the purpose of dewatering, remains the same in PC4 with the exception of Condition 2, which the wording has been changed to '*the take or discharge is not from, into, or onto contaminated or potentially contaminated land*', and Condition 7.

Condition 2, with its rewording is still not met given the historic HAIL activity as identified in the PSI.

Condition 7 specifies that total suspended solids concentration discharged to a surface waterbody does not exceed (1) 50 g/m³ where the discharge is to any Spring-fed river, Banks Peninsula river, or to a lake or wetland, or (2) 100 g/m³ where the discharge is to

any other river or to an artificial watercourse. As the discharge will be to land, the amendments to Condition 7 are not relevant.

Therefore, the activity remains classified as a **restricted discretionary** activity under Rule 5.120.

2.7.1 Damming of water

There are minor changes in wording to Rule 5.154, and Condition 1 (b) has been amended to specify that the maximum depth of water impounded above ground level (measured as the maximum vertical distance between the crest of the dam and the ground level immediately adjacent to the dam) is less than 4 m. Condition 1 (b) cannot be met, nor can Condition 1 (a) which remains unchanged.

As per Rule 5.155, which similarly has minor changes in wording, the storage of water on land (outside the bed of a river or lake) that does not meet one or more of the conditions of Rule 5.154 remains classified as a **discretionary** activity.

2.7.2 Discharges

2.7.2.1 Seepage water

Rules 5.98 and 5.100 are unchanged in Plan Change 4, and therefore the discharge of water or contaminants onto or into land where a contaminant may enter groundwater remains classified as **discretionary** activity as per Rule 5.100.

2.7.2.2 Discharge of construction-phase stormwater

In PC4, the stormwater discharge Rules have been split into separate rules for construction-phase and post-construction stormwater. For the discharge of construction-phase stormwater to land, the relevant Rule is Rule 5.94A.

Condition 1 requires that the area of disturbed land from which the discharge is generated is less than (1) 1,000 m² for any construction-phase stormwater generated as a result of work carried in out in an area shown as High Soil Erosion Risk on the Planning Maps; or (2) two hectares in any other location. As per LWRP planning maps B-056 and B-064, the site is not located in an High Soil Erosion Risk area, and the two hectare limit applies. The storage pond will be approximately 40 ha, and therefore Condition 1 is not met

Condition 2 specifies limits for the concentration of total suspended sediments of the discharge, where the construction-phase stormwater discharges to surface water. The discharge will be to land, and Condition 2 is therefore not relevant.

Condition 3 relates to the increase in flow in the receiving waterbody at the point of discharge. As construction-phase stormwater will be discharged to land, Condition 3 is not relevant.

Condition 4 requires that the discharge is not from, into, or onto contaminated or potentially contaminated land. As discussed previously, a historic HAIL activity (waste disposal to land - HAIL reference G5) has been identified within the pond footprint. As such, Condition 4 cannot be met. However, it is noted that as per the Accidental Discovery Protocol, any potential waste materials, if encountered during excavations, will be characterised, removed and disposed of at an appropriate facility or reburied.

Condition 5 requires that the discharge does not contain any hazardous substances. As noted above, any waste materials encountered during excavations will be characterised,

disposed of or reburied, and therefore construction-phase stormwater is not expected to contain any hazardous substances. Condition 5 is therefore expected to be met.

As not all of the Conditions are met, the discharge of stormwater into onto or into land in circumstances where a contaminant may enter water remains classified as a **restricted discretionary** activity as per Rule 5.94C.

3.0 Canterbury Natural Resources Regional Plan (NRRP)

The NRRP became operative in June 2011, and all of Chapter 3 – Air Quality and parts of Chapter 5 – Water Quantity remain in effect.

3.1 Discharge of fugitive dust

The Canterbury Natural Resources Regional Plan (NRRP) became fully operative on 22 June 2011. Chapter 3 contains rules regarding air quality. Rule AQL38 provides for the discharge of fugitive dust emissions from unconsolidated surfaces as a permitted activity provided that the dispersal or deposition of particles shall not cause an objectionable or offensive effect beyond the boundary of the property where the discharge applies.

The works will be undertaken in a manner which minimises the potential for dust generated from any the exposed surfaces during the installation works. A Dust Management Plan will also identify methods to ensure that fugitive dust does not go beyond the site boundaries. It is expected that any potential effect arising would be temporary and once the site is established, the risk would be negligible. It is on this basis, the discharge of fugitive dust is classified as a **permitted** activity under Rule AQL38.

Rule AQL42B classifies for the discharge of contaminants into air from the handling, processing, conveying or storage of bulk materials that is not part of a quarrying or mining activity and which is not undertaken within a permanent structure which is fully enclosed as a permitted activity. The Rule sets limits for the activity, which states that a) the rate of screening or handling of the material does not exceed 100 tonnes per hour, b) the quantity of material handles does not exceed 100 tonnes per hour, and c) the amount of bulk material stores does not exceed at any time 1,000 tonnes when the material is of a particle size of less than 3.5 mm.

Condition 1 requires that the dispersal or deposition of particles shall not cause an objectionable or offensive effect beyond the boundary of the property where the discharge originates. As per the propose mitigation measures, erosion and sediment control measures will be in place limit the potential for fugitive dust. With such measures in place, it is expected that Condition 1 will be met.

Condition 2 requires that if the rate exceeds 50 tonnes per hour in any one hour, any discharge of contaminants to air shall not be located within 200 m of a sensitive activity. As a residential dwelling is located 40 m north of the site boundary, Condition 2 cannot be met.

Furthermore, the rate of handling (screening and excavation) will not exceed 100 tonnes per hour, and as such limits a) and b) will be adhered to. However, limit c) requires the amount of material stored does not exceed 1,000 t when it has an average particle size of less than 3.5 mm. Given that the footprint of the pond is approximately 40 ha, and excavation depths of up to 8 m at its deepest point, this limit could be exceeded.

Therefore, the discharge of fugitive dust to air from the bulk handling and store of materials is classified as a **discretionary** activity as per Rule AQL57.

3.2 Discharge to air from transfer of petroleum products

Rule AQL39 states the discharge of contaminants into air from the storage or transfer of petroleum products is a **permitted** activity, provided the discharge of odour beyond the boundary of the site shall not be noxious, dangerous, offensive or objectionable to such an extent that it has an adverse effect on the environment. The proposed works may involve the transfer of hydrocarbons (diesel and oil) on-site for refuelling during construction, however any potential discharge is not expected to be noxious, dangerous, offensive or objectionable so as to have an adverse effect on the environment. As such, the discharge of contaminants to air from fuel storage is classified as a **permitted** activity.

3.3 Discharge to air from internal combustion of diesel, petrol or gas

The construction of the storage pond will involve the use of a stationary screening plant. Rule AQL25A states that the internal combustion of diesel, petrol or gas 300 kW or less on production land which is zoned rural in an operative city or district plan but outside of the Christchurch Clean Air Zones 1 and 2, Rangiora Clean Air Zones 1 and 2, Kaiapoi Clean Air Zones 1 and 2 and Ashburton Clean Air Zones 1 and 2 is a permitted activity, provided all Conditions are met.

The Akarana storage pond site is located in the Rural B zone as per the Ashburton District Plan, and is not located in any of the aforementioned Clean Air Zones. Therefore Rule AQL25A applies. Condition 1 requires that any use of internal combustion equipment discharging to air for purposes other than electricity generation shall not exceed 150 hours per year. At this stage, the exact plant and machinery to be used during the pond's construction have not yet been confirmed. However, based on equipment used for the construction of large irrigation storage pond elsewhere in the region, a stationary screening plant is likely to be used. The plant will not be operated outside of the hours of 7:30 am to 6:00 pm Monday to Saturday. The screening plant is expected to be required for more than 150 hours in a 12 month period, and therefore the activity is classified as **discretionary** under rule AQL27.

3.4 Damming of water

Chapter 5 – Water Quantity of the NRRP contains the rules relevant to the storage pond damming activity. Rule WQN23 relates to the damming and/or diverting of water that is not in the bed of a surface water body or is in an artificial watercourse.

The storage of water in the proposed pond (damming) will be within the site shown in Appendix A Figure 2 and Drawing BCI1613/30/21, and therefore the activity will not flood land or property occupied by another person. Condition 1 is therefore met.

Condition 2 requires that the activity does not affect any wetland, except where this is authorised under Rule WTL2 as a permitted activity. There are no wetlands located on the site, which is adjacent to the Rangitata Diversion Race, and as such Condition 2 is met.

Condition 3 states that where certification under the Building Act is not required and the volume of water impounded above the pre-dam contour is greater than 5,000 cubic metres, the dam structure shall be designed by, or under the guidance of a chartered professional engineer (civil), and once commissioned, shall be certified by a chartered professional engineer (civil). The volume of water impounded above the pre-dam contour

will be greater than 5,000 m³, and will be designed by and certified by a chartered professional engineer, however certification is required under the Building Act. Therefore Condition 3 cannot be met.

Condition 4 relates to the passage of fish and other migratory in an artificial watercourse. As the damming activity will occur on land, this Condition is not relevant. Condition 5 requires that a copy of the certification document be sent to Environment Canterbury.

As Condition 3 is not met, and the activity has not already been lawfully established, the damming activity is classified as a **restricted discretionary** activity.

4.0 Proposed Canterbury Air Regional Plan (pCARP)

4.1 Discharge of fugitive dust

The proposed Canterbury Air Regional Plan (pCARP) was notified on 28 February 2015. Rule 7.30 states that the discharge of dust beyond the boundary of the property of origin from where less than 4 ha of land is unsealed or unconsolidated at any one time is a permitted activity provided all conditions are met. The site of proposed works is approximately 40 ha, and therefore this rule is not applicable.

Rule 7.37 states that the discharge of contaminants to air from the handling of bulk solid materials is a permitted activity, provided the following conditions are met:

1. The rate of handling does not exceed 100t per hour; or
2. Where handling occurs on less than 21 days per calendar year, the rate of handling does not exceed 250t per hour; and
3. the discharge does not cause a noxious or dangerous effect; and
4. Where the rate of handling exceeds 20t per hour, a dust management plan prepared in accordance with Schedule 2 must be held and implemented by the persons responsible for the discharge into air; and
5. The dust management plan is supplied to the CRC on request; and
6. The discharge does not occur within 200m of a sensitive activity, wāhi tapu, wāhi taonga or site of significance to Ngāi Tahu.

The excavation works and the placement of embankments will involve the handling of land material. The rate of handling of handling will not exceed 100t per hour, and the potential discharge of fugitive dust to air will not cause a noxious or dangerous effect. A dust management plan will be prepared and supplied to the CRC on request. Therefore Conditions 1 and 3-5 are met.

The activity is not located within 200 m of wāhi tapu, wāhi taonga or a site of significance to Ngāi Tahu addition. pCARP defines a sensitive site as a site where a sensitive activity takes place, which includes the notional boundary of an occupied dwelling. A residential dwelling is located approximately 40 m north of north-eastern boundary of the storage pond. As such, Condition 6 cannot be met.

The screening plant will be set up more than 50 m from the notional boundary, and therefore Condition 2 is applicable. Given that the duration of earthworks and use of construction vehicles is likely to be 4-6 months, Condition 2 cannot be met.

As not all the Conditions are met, the discharge of dust to air from the handling of bulk solids (earthworking) is classified as a **discretionary** activity as per Rule 7.59.

Furthermore, Rule 7.38 is also relevant, which states that the discharge of contaminants into air from the outdoor storage of bulk solid materials is a permitted activity, provided all conditions are met.

Condition 1 requires the amount of material stored does not exceed 1,000 t when it has an average particle size of less than 3.5 mm. Given that the footprint of the pond is approximately 40 ha, this amount of material stockpile material could exceed 1,000 t, therefore this Condition may not be met.

Condition 2 requires the discharge does not cause a noxious or dangerous effect, and it is expected this Condition will be met. A dust management plan will be prepared and supplied to the CRC on request, thereby meeting Conditions 3 and 4.

Condition 6 requires that the discharge does not occur within 100 m of a sensitive activity, wāhi tapu, wāhi taonga or site of significance to Ngāi Tahu. Given that a residential dwelling is located approximately 40 m north of the pond site boundary, Condition 6 cannot be met.

Therefore, the discharge of dust to air from the outdoor storage of bulk materials **discretionary** activity under per Rule 7.59

4.2 Discharge to air from transfer of petroleum products

Rule 7.34 specifies that the discharge of contaminants into air from the storage or transfer of petroleum products, including vapour ventilation and displacement, is a permitted activity provided the following conditions are met:

1. The discharge does not cause a noxious or dangerous effect; and
2. If there is a discharge of odour or dust beyond the boundary of the property of origin, an odour and/or dust management plan prepared in accordance with Schedule 2 must be held and implemented by the persons responsible for the discharge into air; and
3. The odour and/or dust management plan is supplied to the CRC on request.

During the construction activity, petroleum products (diesel and oil) may be transferred on-site during refuelling, and hence there is the potential for contaminants to be discharged to air. The refuelling activity however is not expected to result in any noxious or dangerous effect. No discharge of odour is expected, however a dust management plan will be prepared as per the preceding section which will be made available to the CRC on request. All conditions are met, and the storage and transfer (refuelling) of petroleum products is classified as a **permitted** activity.

4.3 Discharge to air from internal combustion of diesel, petrol or gas

Rules 7.24 to 7.27 of the pCARP relate to internal combustion. Rules 7.24 and 7.25 relate to the internal combustion of diesel, petrol or gas for the purpose of emergency electricity generation, maintenance and peak electricity network load management, and therefore are not relevant.

Rule 7.26 relates to the discharge of contaminants to air from the combustion of diesel, petrol, liquefied petroleum gas or compressed natural gas in any mobile large scale

internal combustion device with a net energy output of up to 500 kW, and classifies the activity as permitted provided that all conditions are met. The screening plant that will be used, as described in Section 3.3, is *stationary*, and therefore this Rule may not be directly relevant.

Rule 7.26 Condition 1 requires that the discharge does not occur for no more than 48 hours if within 50m of a sensitive activity, and Condition 2 that the discharge occurs for no more than 5 days if at least 50 m from a sensitive activity.

A residential dwelling, which is considered a sensitive activity, is located approximately 40 m north of north-eastern boundary of the storage pond. The screening plant will be set up more than 50 m from the notional boundary, and therefore Condition 2 is applicable. The stationary screening plant will be required for more than 5 days, hence Condition 2 cannot be met.

Condition 3 states that the sulphur content of the fuel burnt does not exceed 0.001 % by weight, and Condition 4 that the opacity of the discharge is not darker than Ringelmann Shade No. 1, as described in Schedule 5, except for a period not exceeding two minutes in each hour of operation. Lastly, Condition 5 requires that the discharge does not cause a noxious or dangerous effect. It is expected that Conditions 3 to 5 will be met.

As not all the Conditions can be met, the discharge of contaminants to air from the internal combustion of diesel and/or petrol fuel associated with the screening plant is classified as a **discretionary** activity as per Rule 7.27.

Rule 7.27 furthermore states that the discharge of contaminants to air from any large scale fuel burning device that is not otherwise provided for by Rules 7.3, 7.4 or 7.19-7.26 is a discretionary activity. Therefore, even if Rule 7.26 is not applicable, the activity is still classified as **discretionary** under Rule 7.27.

5.0 Ashburton District Plan

The Operative District Plan was approved by Ashburton District Council on 7 August 2014 and became operative on 25 August 2014.

5.1 Definitions

Section 17 of the Operative District Plan provides definitions of terms used within the District Plan. Based on the Section 17 definitions, the pond embankments are considered a 'building', the storage pond a 'utility', and pond embankment and lining material as 'cleanfill'.

5.1.1 Building

The following terms are defined in Section 17 of the Operative District Plan:

"for the purposes of this Plan, means, as the context requires and unless stated to the contrary in another definition or in a rule:

Any structure or part of a structure, whether temporary or permanent, movable or immovable, but does not include:

- i) any scaffolding or falsework erected temporarily for maintenance or construction purposes;*

- ii) *fences, walls or retaining walls of 2m in height or less not used for advertising for any purpose;*
- iii) *structures less than 5m² in area and less than 2m in height;*
- iv) *masts, poles, radio and television aerials (excluding dish antennae for receiving satellite television), less than 7m above ground level;*

any vehicle, trailer, tent, caravan or boat whether fixed or movable unless such vehicle, trailer, tent, caravan or boat shall be used as a place of accommodation, business or storage."

Based on the above definition, the pond embankments are considered a building under the District Plan.

5.1.2 Utility

The District Plan's definition of utilities includes facilities, structures and works necessary for, incidental to, and associated with, providing *"the storage, treatment and conveyance of water, stormwater and sewage."* The storage pond will be used to store water from the RDR and is therefore considered to be a utility under the District Plan.

5.1.3 Cleanfill

The District Plan defines cleanfill as *"any natural material which is free of: combustible, putrescible, degradable or leachable components or materials likely to create leachate by means of biological breakdown; hazardous substances or any products or materials derived from hazardous waste treatment, stabilisation or disposal practices; contaminated soil or other contaminated materials; medical or veterinary waste; asbestos or radioactive substances. It includes (but is not limited to) clay, rock, concrete and bricks"*.

The pond's embankments will be constructed from fluvioglacial outwash material, and the invert of the pond will be lined with a layer of compacted loess/silts, using materials recovered during the excavation of the pond footprint. In addition, clean imported materials such as riprap and AP20 will be used near the pond's inlet and outlet structures. These materials are considered cleanfill materials under the District Plan.

5.2 Section 3: Rural Zone

Section 3 of the Plan contains Rules relevant to Rural zoned land, and includes rules relevant to earthworks. The storage pond, however, meets the definition a utility under the plan, and therefore can be considered under Chapter 14 of the Plan as a utility. Section 14.7.5 notes that the *"rules contained in this section take precedence over any other zone rules that may apply to utilities in the District Plan, unless specifically stated to the contrary."* Therefore, the Section 14 Rules override the Section 3 Rules, and the establishment of the storage pond and associated earthworks are considered under Section 14.

5.3 Section 11: Noise

Rule 11.6.1 specifies that all noise activities are permitted activities, provided that they comply with all of the relevant General and Noise Standards and all relevant Zone and District Wide rules.

As per Section 11.8.3, the relevant noise standard for construction activities is NZS 6803:1999 Acoustics – Construction Noise. The construction of the pond will comply with NZS 6803:1999, and therefore is classified as a **permitted** activity.

5.4 Section 14: Utilities

Section 14 of the District Plan provides the rules relating to utilities. Rule 14.7.1 allows as a permitted activity for the operation, maintenance, refurbishment, upgrade, and enhancement of irrigation and stock water systems, open drains and channels, water reservoirs, storage ponds and related facilities/structures. However, the Rule does not provide for the establishment of a new pond. Rule 14.7.4 (d) states that any other utility not specifically listed as a permitted or restricted discretionary activity is a discretionary activity. The establishment of a new utility (the storage pond) is therefore classified as a **discretionary** activity under Rule 14.7.4 (d).

Site Standard 14.8.3 (c) requires that the minimum setback of any building more than 10 m² ground floor area and/or over 2 m in height shall be set back at least 2 m or half the height of the structure from the road boundary. As per site Standard 14.8.3 d), the setback of the utility building from internal boundaries must not be less than half the height of the structure, or 2m, whichever is greater. 14.8.3 (e) requires that dams, water reservoirs and storage ponds is 1 m from the road boundary, except at intersections where the minimum setback shall be 3 m. The pond embankments will be a maximum of 10 m in height and the toe of the pond embankment will be a minimum of 6 m from all property boundaries, and therefore the road boundary setback will be complied with.

Site Standard 14.8.5 requires that utility buildings and buildings ancillary to utilities in all zones shall not exceed a gross floor area of 50 m², or a height of 3.5 m. This Site Standard will not be met.

Site Standard 14.8.8 requires a minimum 2 m wide landscaped area within the setback along road boundaries. The activity will comply with Site Standard 14.8.8.

5.5 Section 16: Hazardous Substances

Note 2) in Section 14.7.5 specifies that the Section 14 Rules do not override Section 16 – Hazardous Substances Rules. As such, consideration of the Section 14 Rules must be made with respect to the storage of diesel during the pond construction.

Rule 16.7.1 allows for the storage of hazardous substances in Appendix 16-1, Table 16-1 as a permitted activity in quantities not exceeding those specified in Column A of Table 16-2 for the relevant zone.

Table 16-1 lists flammable liquids, which includes diesel and petroleum oils. For Rural Zones, the Table 16-2 limit for aboveground storage of flammable liquids is 5,000 litres for HSNO Class 3.1D hazardous substances, and 3,000 litres for HSNO Class 3.1A/B/C.

During construction, it is anticipated that a mobile fuel tank truck, capable of holding up to 12,000 L of diesel petrol, will be used. The aboveground storage of up to 12,000 litres of diesel in a fuel tank truck is therefore classified as a **discretionary** activity.

The relevant Site Standard is 16.7.7 (Storage and loading / unloading areas). The site is located with a Rural zone, and hazardous substances will not be stored within 20 m of any waterbody or artificial watercourse. Therefore, as per Site Standards 16.7.7 f), Site Standards a), b) and c) do not apply.

The site is not identified as being at high risk of flooding, not within an area of significant conservation value or Takata Whenua as a Statutory Acknowledgement area, Silent File area, Wāhi Taonga site, Wāhi Taonga Management Area, or Mahinga Kai site. The substance will not be stored within 20m of a waterbody. As such, Site Standard 16.7.7 d) is met.

The hazardous substance will not be stored within 20 m of any boundary with a site containing a sensitive activity, thereby complying with Site Standard 16.7.7 e).

Site standards 16.7.7 g) – l) are not relevant to the proposed activity.

Therefore Site Standard 16.7.7 will be complied with.

6.0 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

The *Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011* (referred to as the NES) provides a nationally consistent set of planning controls relating to contaminated land. Ultimately, the NES seeks to control activities on contaminated land so as to protect human health. The regulations apply to land which is described as having, has had or is more likely than not to have had an activity or industry described in the HAIL undertaken on it.

As noted in the PSI, a historical HAIL activity (Waste disposal to land (HAIL reference G5)) has been identified within the footprint of the proposed storage pond. Therefore under regulation 5(7), the NES regulations must be taken into consideration for the proposed earthworks at the site.

The NES sets out regulations for the following activities as described in sub-clauses (2) – (6) of regulation 5:

- (2) An activity is removing a fuel storage system from the piece of land or replacing a fuel storage system in or on the piece of land.*
- (3) An activity is sampling the soil of the piece of land, which means sampling it to determine whether or not it is contaminated and, if it is, the amount and kind of contamination.*
- (4) An activity is disturbing the soil of the piece of land.*
- (5) An activity is subdividing land.*
- (6) An activity is changing the use of a piece of land which, means changing it to a use that, because the land is as described in sub clause (7), is reasonably likely to harm human health.*

Relevant to this application are sub-clauses 6 (change in land use) and 4 (soil disturbance), as discussed below.

6.1.1 Change in Land Use

The activity also involves a change in land use, namely from paddocks to the storage of water on land. A change in land use is permitted under sub-clause 8(4), provided that a PSI has been completed and it can be demonstrated through the review of the site history it is highly unlikely that there will be a risk to human health if the activity is done to the

‘piece of land’. A PSI has been completed for the site, which demonstrates that it is highly unlikely that there will be any risk to future site users post construction of the pond. The change in land use is therefore **permitted** under the NES.

6.1.2 Soil Disturbance

Regulation 8 (3) relates to disturbing soil, and states that:

- (3) Disturbing the soil of the piece of land is a permitted activity while the following requirements are met:*
- a. controls to minimise the exposure of humans to mobilised contaminants must—*
 - i. be in place when the activity begins:*
 - ii. be effective while the activity is done:*
 - iii. be effective until the soil is reinstated to an erosion-resistant state:*
 - b. the soil must be reinstated to an erosion-resistant state within 1 month after the serving of the purpose for which the activity was done:*
 - c. the volume of the disturbance of the soil of the piece of land must be no more than 25 m³ per 500 m²:*
 - d. soil must not be taken away in the course of the activity, except that, —*
 - i. for the purpose of laboratory analysis, any amount of soil may be taken away as samples:*
 - ii. for all other purposes combined, a maximum of 5 m³ per 500 m² of soil may be taken away per year:*
 - e. soil taken away in the course of the activity must be disposed of at a facility authorised to receive soil of that kind:*
 - f. the duration of the activity must be no longer than 2 months:*
 - g. the integrity of a structure designed to contain contaminated soil or other contaminated materials must not be compromised.*

As described in the AEE, the expected duration of the construction activity is 4-6 months. The pond footprint is approximately 40 ha, and excavations may extend up to 8 m below ground level in some areas; therefore, the volume of soil disturbance will exceed 25 m³ per 500 m². In addition, the volume of soil removed within the two historical waste pit areas is expected to be exceeded. As sub-clauses (3) c, d and f cannot be met, the soil disturbance activity does not meet the permitted activity criteria under the NES.

As a detailed site investigation (DSI) has not been prepared for the site, the soil disturbance activity is classified as a **discretionary** activity and requires an ADC resource consent under the NES.

7.0 Summary of Planning Rule Classification

The following tables provide a summary of the activity status classifications for the activities associated with the construction, maintenance and use of the Akarana Storage Pond. The overall activity status for the entire proposal is discretionary.

Table 1: Regional Planning Classification for Activities Associated with the Installation of the Akarana Storage Pond
Land Use Activities
Relevant Regional Plans to Consider: Land and Water Regional Plan, and any Plan Changes

Activity	LWRP		PC4		Overall Status	Consent Required Y/N
	Rule	Status	Rule	Status		
Excavation over the Unconfined/Semiconfined Aquifer	Rule 5.175/5.176	Restricted Discretionary	Rule 5.175/5.176	Restricted Discretionary	Restricted Discretionary	Y
Deposition over the Unconfined/Semiconfined Aquifer	Rule 5.177	Controlled	Rule 5.177	Controlled	Controlled	Y
Storage and use of hazardous substances (diesel)	Rule 5.179	Permitted	Rule 5.179	Permitted	Permitted	N

Diversion/Damming Activities
Relevant Regional Plans to Consider: Land and Water Regional Plan, and any Plan Changes
Damming activity¹ must also consider Natural Resources Regional Plan as LWRP damming rules are under appeal.

Activity	LWRP		PC4		Overall Status	Consent Required Y/N
	Rule	Status	Rule	Status		
Site Dewatering	Rule 5.119/5.120	Restricted Discretionary	Rule 5.119/5.120	Restricted Discretionary	Restricted Discretionary	Y
Damming of water & use of land to store water	Rule 5.154/5.155	Discretionary	Rule 5.154/5.155	Discretionary	Discretionary ¹	Y
	NRRP Rule WQN23	Restricted Discretionary	N/A	N/A		

Discharges to Land and Water
Relevant Regional Plans to Consider: Land and Water Regional Plan, and any Plan Changes

Activity	LWRP		PC4		Overall Status	Consent Required Y/N
	Rule	Status	Rule	Status		
Discharge seepage water to land	Rule 5.98/5.100	Discretionary	Rule 5.98/5.100	Discretionary	Discretionary	Y
Discharge construction stormwater to land	Rule 5.96/5.97	Discretionary	Rule 5.94A/5.94C	Restricted Discretionary	Restricted Discretionary ²	Y

Discharges to Air

Relevant Regional Plans to Consider: Natural Resources Regional Plan and the Proposed Canterbury Air Regional Plan

Activity	NRRP		Proposed CARP		Overall Status	Consent Required Y/N
	Rule	Status	Rule	Status		
Discharge of fugitive dust to air from bulk earthworks/handling	AQL42B/57	Discretionary	Rule 7.37/7.59 7.38/7.59	Discretionary	Discretionary	Y
Discharge to air from internal combustion equipment	Rule AQ25A/AQL27	Discretionary	Rule 7.26/7.27	Discretionary	Discretionary	Y
Discharge to air from transfer of petroleum products (refuelling)	Rule AQL39	Permitted	Rule 7.34	Permitted	Permitted	N

Notes:

1. PC4 Rules 5.154 and 5.154 are now operative. Overall classification as per PC4.
2. PC4 Rules 5.94A and 5.94C are now operative. Overall classification as per PC4 Rules 5.94A and 5.94C.

Table 2: District Planning Classification for Activities Associated with the Installation of the Akarana Storage Pond

Ashburton District Plan

Activity	Rule	Status	Consent Required (Y/N)
Establishment and use/operation of new utility (storage pond) ¹ including associated earthworks	Rule 14.7.1/14.7.4 (d)	Discretionary	Y
Storage of hazardous substances (diesel)	Rule 16.7.1	Discretionary	Y
Construction noise	Rule 11.6.1	Permitted	N

Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011

Activity	Sub-clause	Status	Consent Required (Y/N)
Soil disturbance	Sub-clause 8(3)/11(1-2)	Discretionary	Y
Change in land use	Sub-clause 8(4)	Permitted	N

Notes:

1. As per Note 1) in Section 14.7.5, Section 14 Rules take precedence over any other zone rules that may apply to utilities in the District Plan, unless specifically stated to the contrary.