
in the matter of: the Resource Management Act 1991

and: submissions in relation to **Plan Change 5** to the proposed Canterbury Land and Water Regional Plan

and: **Dairy Holdings Limited**

Submitter C16C/30985

Further Submitter C16C/72306

Statement of evidence of Colin Glass

Dated: 22 July 2016

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STATEMENT OF EVIDENCE OF COLIN GLASS

INTRODUCTION

- 1 My name is Colin Glass.
- 2 I am the Chief Executive of Dairy Holdings Limited (*DHL*), a position I have held for over 15 years.
- 3 Previously I held the positions of General Manager and Chief Financial Officer of the NZX listed company Tasman Agriculture Limited for five years and the General Manager of Tasman Farms Limited with Tasmanian dairy farming interests for 7 years. I have been involved with both the New Zealand and Australian dairy industries for about 27 years.
- 4 I am a qualified Chartered Accountant and hold a Commerce Degree in Farm Management and a Post Graduate Diploma in Accountancy and Corporate Finance from Lincoln University. I was raised on a mixed farming and dairy property at Methven, and from employment on a number of farming properties prior to my 'professional life', I have an extensive, hands-on practical knowledge of farming.
- 5 Before commencing the position with Tasman Agriculture Limited, I was employed as a chartered accountant with Price Waterhouse Coopers in Christchurch for four years.
- 6 I have been directly involved in numerous resource consent and plan change proposals since the formation of DHL – many of which have directly addressed matters relating to nutrients (this includes Plan Changes 1, 2 and 3 to the proposed Canterbury Land & Water Regional Plan). I also have a very good understanding of dairy farm systems and how dairy farms ultimately run on a day-to-day basis.
- 7 I am authorised to provide this evidence on behalf of DHL.

SCOPE OF EVIDENCE

- 8 In my evidence I provide:
 - 8.1 an overview of DHL and its farm system;
 - 8.2 a discussion of the potential impacts of Plan Change 5 (*PC5*) on DHL's operations and the importance of the farm enterprise/nutrient users group regime to DHL; and
 - 8.3 a brief outline of the relief that DHL seeks in PC 5.

OVERVIEW OF DHL AND ITS FARM SYSTEM

- 9 DHL is a New Zealand registered company with 100% of its farming assets in the South Island. It is the largest closely-held dairy farming business in New Zealand.
- 10 DHL's farming interests are all held through wholly owned subsidiary entities however for ease of reference I simply refer to these as 'DHL' in my evidence.
- 11 For the 2016/2017 season DHL is operating 58 dairy units on 13,890 effective hectares, milking 48,000 cows and is on target to produce approximately 16.87 million kilograms of milk solids. DHL farms employ approximately 340 people in its operations.
- 12 In addition, DHL owns or leases:
 - 12.1 four large scale special purpose heifer grazing blocks covering a total area of ~1,361 ha that rear and grow around 7,500 heifer calves and 8,000 in-calf heifers each year;
 - 12.2 fourteen grazing and dry stock blocks covering ~3,703 ha that are utilised for carryover cows and winter grazing; and
 - 12.3 one bull unit (a farm with an area of 271ha) that supplies 1,200 service bulls to the dairy farms.
- 13 DHL's farms are principally located in the Canterbury, Springs Junction (Buller), Waitaki, and South Otago/Southland regions. In Canterbury itself, DHL has extensive interests including:
 - 13.1 the Waimakariri area (where the farms receive water from the Waimakariri Irrigation Scheme);
 - 13.2 the Central Canterbury area (between the Rakaia and Waimakariri Rivers) where the farms receive water from either irrigation schemes, groundwater, or individual surface water takes – or, in many instances a combination of those sources. This area is now subject to Plan Change 1 (*PC 1*);
 - 13.3 the Mid Canterbury area (between the Rakaia and Rangitata Rivers). DHL's farms in this area are similarly irrigated mainly through irrigation schemes or groundwater (or a combination of the two). Some of this area will be subject to Plan Change 2 (*PC 2*) (although that is under appeal at the time of this evidence); and
 - 13.4 the wider South Canterbury area. Three of these properties are located within the Plan Change 3 (*PC 3*) area and receive water from the Morven Glenavy Irrigation Scheme (although

the properties also have their own groundwater or surface water takes). DHL also has one property within the lower Waitaki catchment and one property near McKinnons Creek (South side of the Rangitata River).

- 14 The general 'DHL farm system' is based on research conducted through Plant & Food Research's Ruakura site and more recently the Lincoln University Dairy Farm. This system was initially promoted by Dr Campbell McMeeken and subsequently by Dr Arnold Bryant, and continues to be supported in higher comparable stocking rate systems¹ by DairyNZ.
- 15 In simple terms, DHL is focused on achieving consistent and repeatable levels of profitability predicated on simple, pasture based management systems. This means a relatively low input system that has:
- 15.1 a reduced reliance on supplementary feed being brought on to farm;
 - 15.2 centralised wintering of non-lactating cows and replacement young stock raising;
 - 15.3 careful nutrient budgeting and fertiliser applications that are aimed at producing maximum pasture (with minimum fertiliser being 'lost' in the system); and
 - 15.4 lower stocking rates (on a per hectare basis) but a higher comparable stocking rate (in terms of the stocking rate relative to the feed available) than those which might typically be seen on other farms within the same relevant area where systems with increased supplementary feeding are adopted.
- 16 Generally, our farm system results in milk solid production that in the past is about 100 kg/ha/year lower than what might be seen on the majority of farms in the same area. However, due to lower input costs relative to those farms, DHL retaining good profitability

¹ Comparable stocking rate is a measure used within the industry to measure effective stocking rate relative to the amount of feed cows consume. In this regard 'cows per hectare' is often an inadequate description of this balance, and can be misleading when comparing farms which vary in the amount of brought in feed/ha, or have different breeds (e.g. Holstein-Friesian versus Jersey). Comparable stocking rate, along with other indicators, improves the estimation of the balance between annual feed supply and feed demand.

Comparative Stocking Rate is calculated as:

$$\frac{\text{Average lwt (kg/cow) x no. cows/ha}}{\text{total feed (t DM/ha)}}$$

Where Average lwt is average liveweight (in kg per cow) for the herd (including first calvers) as measured or estimated two months before calving starts.

and achieves much higher resilience. I anticipate that with the current low dairy pay out a number of other dairy farmers have moved to a system that more closely resembles of the DHL farm system – i.e. lower reliance on supplementary feed, careful nutrient budgeting and lower stocking rates.

- 17 To this extent it is generally recognised (without getting into the specifics of the *Industry Agreed Good Management Practices relating to water quality*) that the DHL farm system is reasonably close (and in many cases possibly at) what is now understood to be “*Good Management Practices*” for the purposes of PC 5.
- 18 From a nutrient management perspective it is however important to understand that DHL did not, through the nitrogen baseline period (2009-13) have the higher stocking rates, high reliance on supplementary feed, and higher fertiliser use that we saw on some properties in Canterbury. This means that other than changes to modernise older irrigation systems (if they have not already occurred), there are few further opportunities for DHL to improve (i.e. reduce) nutrient loss without drastic changes through, for example, cutting stock numbers (from a starting point that was already less than the activities being undertaken on other properties).

OUTLINE OF MORE GENERAL CONCERNS IN RESPECT OF PC 5

- 19 DHL is conscious that there are a large number of submitters that have raised technical concerns with the Farm Portal, or have otherwise sought to raise issue with the approach taken to nutrient management under PC 5. Many of the matters raised by DHL in its original submission are similar to the issues raised by others (and will be subject of significant technical evidence from other submitters).
- 20 In light of the above, I only provide a brief outline of the more general concerns that DHL has in respect of PC 5. I do however wish to make it clear that DHL fully maintains its submissions and further submissions on all matters, and supports (and intends to adopt) other submitters evidence where it aligns with DHL’s concerns.
- 21 In terms of providing context to the more specific issue I discuss in my evidence (namely farm enterprises) and also giving an outline of DHL’s concerns more generally, a brief outline nevertheless assists:

Schedule 28 and the Farm Portal

- 21.1 It is perhaps appropriate to start with the use of the Farm Portal (which is central to many of the concerns raised by DHL and other submitters).

- 21.2 DHL in fact supports the general intention behind the Farm Portal and Schedule 28 – i.e. to bring together in a web-based tool a nutrient management regime that will allow for the integrated management of farm inputs and outputs. Like many other submitters DHL however remains concerned that the proxies and assumptions that underpin the Farm Portal are either inaccurate or inappropriate in the case of at least some individual farming activities and operations. At the time of preparing evidence the main concerns that had been raised by others were focused on the appropriateness of the fertiliser and irrigation proxies (both obviously of significant relevance to DHL).
- 21.3 In DHL's own experience (and through reviewing our own OVERSEER® budgets) we have found there is a very wide range regarding the modelling of, in particular, irrigation inputs. In this regard, the single biggest issue appears to be where the presence of soil moisture probes has been ticked. This appears to follow through with OVERSEER® derived irrigation volumes (and resulting nitrogen losses) that are unachievably low. Currently, to get volumes that are actually reflective of real-life farm system it would be necessary to do a common sense check between the OVERSEER® derived irrigation volumes and what is actually required (something which is not possible with the Farm portal alone). Based on our observations to date the 'gap' is greatest with rotorainer type systems, but there is still a gap with pivots.
- 21.4 Related to the more technical issues with the Farm Portal is the concept of "Baseline GMP Loss Rate". The intention behind the definition appears to be to bring those properties that are currently limited to operating within their nitrogen baseline down to the loss rates that would accord with the same property being operated at good management practice. The definition currently provides:
- means the average nitrogen loss rate below the root zone, as estimated by the Farm Portal, for the farming activity carried out during the nitrogen baseline period, if operated at good management practice; and where a Baseline GMP loss rate cannot be generated by the Farm Portal it means the nitrogen baseline.*
- 21.5 The definition will work fine for those properties where there has only been one farming activity during the nitrogen baseline period (most often dairy in the case of DHL). In some instances DHL has however for example converted or expanded properties that were previously farmed for different purposes within the baseline period. This has seen the conversion of drystock or wintering support land into dairying.

In such a circumstance there are effectively two or more farm activities within the baseline period, and the good management practice losses for the farm activity currently occurring on the property might be significantly lesser or greater than that which has occurred during at least part of the baseline period.

- 21.6 In its original submission DHL suggested that the focus should instead be on the highest annual losses during the baseline period. In response, the Officer has noted that if farmers could use the highest of the four years, instead of the average, it could easily lead to a substantial increase in nitrogen losses across the region.² Leaving aside the extent to which that might actually happen, that is certainly not what DHL intended. Instead, DHL intended that where a property is now operating as a dairy farm (which was lawfully developed as a permitted activity during the nitrogen baseline period), it should now need to comply with the good management practices that apply to a dairy farm rather than the dry-stock or arable or other farm system that preceded it. If it had to comply with the latter it could see properties making unduly harsh reductions or potentially much fewer reductions (if the relevant baseline land use had a good management practice 'number' that is more generous than what would apply to the farming activity currently occurring on the property). Unless, in the case of a property that has changed its land use, the focus turns solely to the existing farming activity (or to put that another way it only has to comply with the "*Good Management Practice Loss Rate*" as opposed to "*Baseline GMP Loss Rate*") then it still seems that the 'highest annual' is the easiest concept to apply and understand.
- 21.7 Nevertheless, similar concerns also arise in respect of the "*Good Management Practice Loss Rate*" (where DHL has sought similar relief in relation to referring to the highest annual losses). In relation to the "*Good Management Practice Loss Rate*" a further issues arises in relation to irrigation schemes although from reading the Officers Report it appears that the view taken is that Rule 5.41A adequately provides for irrigation that may have occurred in the four-year period relevant to the Baseline GMP Loss Rate and the Good Management Practice Loss Rate (as a permitted activity), and changes to the definition are not required.³ However, it does not appear that the Officers' comments would apply to farm enterprises which are not referred to in that rule, and

² See section 42A report at para 6.132

³ See section 42A report at para [6.138]

additionally I am not clear on how the renewal of any resource consent is intended to be dealt with.

- 21.8 Finally DHL is supportive of DairyNZ's submission point calling for limits in N surplus and I expect it might work for some farm systems. However, in DHL's view, (along with the apparent intent of the proxies generally) farmers that harvest more pasture should be enabled to apply more nitrogen than farmers who use more supplementary feed (provided that the nitrogen is still being applied in accordance with good management practice and efficiently).
- 21.9 In this regard, DHL's own farm system focuses on importing very low quantities of supplementary feed, while harvesting higher quantities of pasture (a farm system that appears to be generally in line with good management practice). However, DHL is concerned that the proposed N proxy seems to result in mixed results where the supplement use varies. This appears to be a complex matter with a number of interrelated connections, but in simple terms, any N proxy needs to ensure that farms that efficiently harvest pasture are not subject to further reductions in their N use where such applications are necessary for maintaining efficient pasture growth (and therefore profitability).

The need to accommodate updates – and the need for an alternative

- 21.10 DHL generally supports the use of the reference to "Good Management Practices" and the use of a fixed reference document that defines those practices (in this instance the *Industry-agreed Good Management Practices relating to water quality* (18 September 2015)). DHL would be concerned if good management practice was not certain and decisions made in farming situation could be undone through unforeseen changes in what good management practice is.
- 21.11 There is however a balance to be struck, and in its original submission DHL noted that a mechanism needs to be included in PC 5 requiring the Council to review and if necessary update (by way of plan change in the case of material amends) Schedule 28 and the Farm Portal. As much as anything, that submission was based upon the concern (based on preliminary work done by other members of the primary sector) that there are errors within the proxies/inputs for the Farm Portal. However, the concern also extends to the likely reality that good management practice (as assessed) by the Farm Portal and farming technologies more generally will develop over time. DHL is supportive of such updates occurring, but anticipates that any material updates would need to occur through a plan change process.

- 21.12 Until the Farm Portal is appropriately robust, DHL is of the view that the primary reference either needs to be on good management practice itself (i.e. as defined by the Industry-agreed Good Management Practices relating to water quality) or an alternative consenting pathway needs to be provided that would allow an individual application to be considered 'on its merits' without reference to the Farm Portal. This issue will especially affect those farming activities that are currently not capable of (as I understand it) being run through the Farm Portal, or activities the Farm Portals result – the Good Management Practice Loss Rate does not make a lot of sense in light of the Farm Environment Plan audit grades achieved.
- 21.13 To this end I note that at the time of preparing this evidence DHL (through a subsidiary 'Mr Gingerbread Limited') has an application in process for discharge consent/to use land for a farming activity. The application process has been rather difficult with initial discussions focusing on why reference to the Farm Portal was not appropriate (bearing in mind the rules of PC 5 are currently not in effect) and now how exactly good management practice should be defined (and how updates might be accommodated). Even without the Farm Portal, understanding exactly what good management practice is may not be that straightforward.
- 21.14 More generally, although DHL is supportive of 'good management practice', care needs to be taken (especially if a different approach to that contained in the *Industry-agreed Good Management Practices relating to water quality* is adopted) that 'good management practices' are not elevated to 'best management practices'. Good management practice needs to be achievable using prudent and diligent farm systems (that can be implemented by staff) – rather than a reflection of what is 'academically possible'.
- 21.15 The wider PC 5 regime also needs to incentivise the right kind of behaviour. A good example of this is good management practice should be set with respect to the baseline irrigation system in place (and not be repeatedly re-set to any new irrigation system put in place at a future date) - otherwise the land owner, in the absence of any reason to do so, is unlikely to upgrade irrigation systems (with no credit for any improvements and the 'bar' continually being raised). This means that even where a farm system has changed (as I referred to earlier in my evidence) regard should still be had to the 'higher of' any losses from the irrigation system in place during the baseline period, or any irrigation developed since that time.

The inter-relationship with irrigation schemes

- 21.16 DHL has submitted noting that the inter-relationship between the PC 5 provisions and existing and future consents held by irrigation schemes is not clear. It appears that irrigation scheme consents will continue to be determined through Rules 5.60 to 5.62 (and any sub-regional chapters).
- 21.17 I have already addressed the issues around Rule 5.41A (above) and agree in part with the Officer but am still not clear on whether all concerns are actually resolved. DHL also submitted that PC 5 needs to make clearer that policies 4.37 to 4.38E and the other provisions and rules that relate to individual farming activities and farm enterprises do not apply to irrigation schemes.
- 21.18 In response the Officer has advised that as the LWRP and PC 5 already contain policies and rules that are specific to irrigation schemes and principal water suppliers, further amendments to exclude these entities from the remainder of the provisions is unnecessary.⁴ I don't have any expertise in plan interpretation but if the Officers' position is correct then I am still not sure it will be approached by Investigating Officers on future resource consent applications in exactly the same way. As is shown by our 'Mr Gingerbread experience' (discussed above) even if, for example, proxies do not directly apply an investigation Officer might well think that the requirements of the wider policy framework are still relevant to, for example, determining the applications related to an irrigation scheme.
- 22 I again emphasise that the above is only a snap-shot of the issues raised by DHL in its original submission and further submissions. To avoid duplicating what will be said by other submitters in much detail DHL has only touched on a limited number of matters here. It still maintains and has an interest in all the matters it has previously raised.

IMPACT OF PC 5 ON DHL AND FARM ENTERPRISES

- 23 Consistent with the direction at page 1-3 of PC 5, DHL is not seeking to amend through PC 5 any provisions set by or under consideration in sub-regional processes.
- 24 It is however useful to note prior to discussing farm enterprises that the relief sought by DHL is generally consistent with the relief that it has sought in the preceding plan changes 1, 2 and 3. In this regard the final provisions of PC 1 (operative) and PC 2 (under appeal on unrelated provisions) includes a workable and effective farm

⁴ Section 42A report at para [7.250].

enterprise regime to allow the 'sharing' of nutrients between properties. The parties are still awaiting a decision on PC3. In the most simplest of terms, DHL is seeking that the farm enterprise regime that has now been approved in PC 1 and PC 2 be properly brought through to PC 5.

DHL's use of farm enterprises

- 25 As I discussed above, DHL has extensive holdings in Canterbury, and on all of these properties it operates a low-input system focussed on maximising pasture growth. As I have noted earlier in my evidence, this system is largely aligned with Good Management Practices as agreed by industry and defined in PC 5.
- 26 Farm enterprises are critical to DHL's operations within the Selwyn – Waihora Zone and DHL is intent on pursuing similar frameworks elsewhere in Canterbury.
- 27 By means of reference (appreciating that PC 1 will prevail in the Selwyn – Waihora Zone), DHL's consent CRC143288 is on its face described as a 'nutrient user group' consent but allows the use of land for farming and the associated use of water/discharge of nutrients in 22 central Canterbury farms totalling 6,186 ha in area, six of which are directly or indirectly supplied by the Central Plains Water Scheme.
- 28 A copy of resource consent CRC143288 is included in **Annexure 1**.
- 29 Although referred to as a 'nutrient user group' consent, CRC143288 is in effect a 'farm enterprise consent' as that concept is incorporated into the LWRP and now PC 5 (noting the consent was granted prior to the decisions being released on the LWRP, at which time the two concepts were effectively the same as each other).
- 30 Importantly, the consent provides a cap where the average annual nitrogen loss calculated for the consented properties cannot exceed the nitrogen baseline for those properties.⁵
- 31 Through the consent, DHL has gained the flexibility to:
- 31.1 increase irrigation efficiency (and so decrease N-losses) at farms irrigated with borderdykes and Roto Rainers (and to a lesser extent at spray irrigated properties), so freeing-up losses to allow dryland conversion to irrigation; and
 - 31.2 reduce the intensity or duration of wintering operations on wintering farms by planting feed crops on dairy units out of season, so freeing-up losses to reflect reality on those dairy

⁵ See CRC143288, condition 4.

units that operate close to (but above) a good management practice loss rate.

- 32 DHL has done so without increasing the overall N-loss that those 22 farms would theoretically have been allocated if individually consented.
- 33 In this context, the farm enterprise has allowed DHL to simultaneously improve the financial viability of both irrigated-block conversions to spray and conversions to irrigation on dryland blocks without, overall, any increase in adverse environmental effects.
- 34 Because of the economic and environmental advantages on offer, DHL's preference is to gradually bring more of our farms into collective management regimes.
- 35 Without appropriate recognition of nutrient user groups and/or farm enterprises (depending upon how each is defined) in PC 5, DHL will not be able to pursue further collective management arrangements in future (and although currently in the PC 1 area so not as directly affected by PC 5, it is also potentially relevant to the renewal of resource consent CRC143288).

ECan concerns with nutrient allocation visibility where there is overlap

- 36 I understand that the Officers have concerns with ECan's ability to 'keep visibility' over allocations where collective nutrient allocation regimes overlap. An example is where a farm enterprise overlaps with a discharge consent held by an irrigation scheme.
- 37 This has certainly not been DHL's experience with its own resource consent (which overlaps with the Central Plains scheme) and in DHL's view the reality is that the reporting requirements in relation to collective nutrient management will quickly disclose any 'double counting' or 'transfers' into and out of the wrong place. For example, CRC143288 includes a requirement to maintain very detailed schedules of individual properties (where it will be quickly apparent if an individual farm enterprise allocation is being exceeded or double counted).
- 38 It is also worth bearing in mind that at any material scale, reducing or increasing nutrients on a single property by virtue of a farm enterprise will require capital investment (either by converting to irrigation or converting an existing border-dyke property to higher – efficiency spray irrigation). Any increase in nutrient allocations on a farm in that context is likely to at best 'one time', with it being very difficult to revert back to the pre-farm enterprise situation.

39 Accordingly, DHL's experience is that farm enterprises do not raise the risk of significant allocations 'washing around' between farms within a catchment or of allocations accumulating in a manner invisible to or uncontrollable by ECan.

Farm enterprises versus nutrient user groups

40 Under PC 5, I understand that farming enterprises are defined with reference to the definition included in the 'parent' Land & Water Regional Plan. That definition provides that a farming enterprise:

"means an aggregation of parcels of land held in single or multiple ownership (whether or not held in common ownership) that constitute a single operating unit got the purpose of nutrient management"

41 As DHL noted in its original submission PC 5 Part A makes provision for farm enterprises whereas Part B (the Waitaki provisions) also makes provision for nutrient user groups. Not that it appears explicitly in the Officers Report it appears that the distinction arises through the proposed definition of nutrient user group in PC 3 (noting the notified version of PC 3 takes a different approach to the decisions version of PC 1 and PC 2, and seeks to separate out farming enterprises and nutrient user groups).

42 The definition of "Nutrient User Group" proposed in PC 3 states:

"means a group of properties in multiple ownership, where the owners of those properties undertake farming activities and operate as a collective for the purposes of nutrient management."

43 Separate to the immediate PC 5 process DHL has submitted in opposition to splitting out nutrient user groups and farming enterprises in PC 3 (and it is quite reasonable to contemplate one possible decision of the Commissioners in that matter being to revert back to the simplicity of the regime provided by PC 1 and PC 2).

44 Explicitly, the Officers Report in this process attempts to illustrate the difference between the two concepts by noting that farming enterprises, under PC5, are intended to operate as a "single operating unit" (required to submit a single Farm Environment Plan that covers all properties within the Enterprise) whereas Nutrient User Groups are intended to operate to collectively manage nutrient losses, while still enabling each participant to manage each operation separately, having individual Farm Environment Plans.

- 45 Although there might be difference in that context, DHL is not clear on why the split regime is required and why the same policies and rules cannot deal with the very similar concepts (to repeat PC 1 and PC 2 treats farming enterprises as including both farming enterprises and nutrient user groups as referred to in PC 5).
- 46 As I noted above, nutrient user groups are currently only incorporated into Part B of PC 5 (given the PC 3 connection). DHL considers nutrient user groups are a useful tool and, in terms of wider context, would assist in ensuring irrigation schemes and members within schemes (as well as those outside of a scheme) are able to more effectively manage the implications of the nutrient management regime in manner that is consistent with their respective farming operations.
- 47 Similarly, DHL is of the view that there is also no reason for preventing those within a farming enterprise also being part of a nutrient management group (although DHL's view is that they are really a reference to the same thing so there may be no need to duplicate the relevant provisions).

RELIEF THAT DHL SEEKS IN PC 5

- 48 In DHL's view, appropriate recognition of farm enterprises in PC 5 would boil down to including the matters below.
- 49 PC5 should include policy recognition in Policy 4.38A and 4.41C of farm enterprise and other consents that may not have been implemented at 13 February 2016.⁶ An identical point can be made in relation to a number of PC 5's proposed rules.⁷
- 50 PC 5 should also appropriately recognise nutrient user groups and farm enterprises as conceptually identical – to the extent that DHL has submitted that the approach taken in PC 3 and now PC 5B (that separate the two concepts) is not founded on any real reason for distinction.⁸
- 51 PC 5 should explicitly recognise farm enterprises in Schedule 7. In DHL's view, Schedule 7 should essentially differentiate between individual-farm consents, irrigation scheme/principal water supplier consents and farm enterprises (with nutrient user groups being included as synonymous with farm enterprises). In our view it is elementary that the activities being consented in each case differ markedly in nature, and the operations being managed in each case

⁶ See original Submission point 13 and 18.

⁷ See original Submission point 31, Rules 5.55A, 5.56AA, 5.57C, 5.58A, and 5.58B.

⁸ See original Submission point 26.

differ. Therefore, it does not make sense to apply a common set of requirements for all Farm Environment Plans.⁹

- 52 Given proper policy recognition, farm enterprises should be subject to the same robust Environmental Management Strategy requirements that irrigation schemes and principal water suppliers are. This would be achieved through amending Policy 4.41D or including a new parallel policy.¹⁰

CONCLUSION

- 53 The relief described above is fundamental to the economic viability of DHL's farming operations in Canterbury. Any concerns that ECan has about the environmental implications of farm enterprises are, in DHL's view, unfounded for the reasons I have traversed. Farm enterprises have the same function and effect as nutrient user groups in that they allow some flexibility in nutrient budgeting, without adducing any adverse environmental outcomes.
- 54 On this basis it is DHL's firm view that PC 5 must recognise that farm enterprises and nutrient users groups are, for all intents and purposes identical. Therefore, PC 5 should provide for farm enterprises *and* nutrient user groups broadly equally in order to be consistent with existing nutrient user group consents held by DHL and others.

Dated 22 July 2016

Colin Glass

⁹ See original Submission point 32.

¹⁰ See original Submission point 19, New Policy 4.41DD.

Annexure 1

CRC143288

RESOURCE CONSENT CRC143288

Pursuant to Section 104 of the Resource Management Act 1991

The Canterbury Regional Council (known as Environment Canterbury)

GRANTS TO:	Dairy Holdings Limited
A LAND USE CONSENT:	to use land for farming and to use water
COMMENCEMENT DATE:	11 Jun 2014
EXPIRY DATE:	11 Jun 2019
LOCATION:	Rakaia-Selwyn groundwater allocation zone

SUBJECT TO THE FOLLOWING CONDITIONS:

- 1 Water shall only be used for irrigation, and the use of land for farming shall only occur, on properties within Nutrient Management Group - CRC143288 (NMG-CRC143288).
- 2 Properties within NMG-CRC143288 at the date of issue of this consent are listed in Schedule One, which forms part of this consent.
- 3 Properties may be added to or removed from NMG-CRC143288 provided that:
 - a. the entire property is within the “command area” shown on Plan CRC143288, which forms part of this consent;
 - b. the areas to be farmed on the property to be added do not overlap with a Community Supply Protection Zone as shown on Plan CRC143288;
 - c. prior to the change occurring, the consent holder shall provide an updated list of the properties within NMG-CRC143288, including plans showing the area of each property, to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager;
 - d. the property is not farmed pursuant to another consent to use land for farming;
 - e. no more than 10,000 hectares are within NMG-CRC143288 at any one time; and
 - f. prior to the addition of a property, the consent holder shall provide to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager:
 - i. a Farm Environment Plan (FEP) for that property, prepared in accordance with Schedule Two, which forms part of this consent;
 - ii. the nitrogen baseline calculation for that property, including all of the modelling inputs and outputs; and
 - iii. the confirmation that the owner of the property consents to joining NMG-CRC143288.

For the purposes of this condition the nitrogen baseline calculation is defined as the annual average nitrogen loss to water, as modelled with OVERSEER®, or equivalent model approved by the Chief Executive of Environment Canterbury, averaged over the period of 01 July 2009 – 30 June 2013, and expressed in kg. The current version of OVERSEER® shall be used and the inputs shall be updated where relevant to reflect the current Overseer Best Practice Data Input Standards, but they must still describe the same baseline scenario.

Use of land

- 4 The average annual nitrogen loss to water calculated for the properties within NMG-CRC143288 shall not exceed the nitrogen baseline for those properties.

For the purposes of this condition:

- a. the average annual nitrogen loss to water shall be calculated on a four year rolling average basis and in accordance with Schedule Two; and
- b. the nitrogen baseline shall be determined using the formula $X + Y - Z$, where the variables are described as follows:
 - X is the average annual nitrogen loss to water calculated using the current version of OVERSEER® when the Original Inputs are used. The Original Inputs are those which describe the baseline scenario in the consent application for those properties listed in Schedule One. The inputs shall be updated to where relevant to reflect the current OVERSEER® Best Practice Data Input Standards, but they must still describe the same baseline scenario.
 - Y is the average annual nitrogen loss to water calculated for the nitrogen baseline for the properties added to NMG-CRC143288, in accordance with Condition 3.
 - Z is the average annual nitrogen loss to water calculated using the current version of OVERSEER® for the properties removed from the NMG-CRC143288 using the Original Inputs as described above.

Advisory Note: When OVERSEER® version 6.1.1 is used X equals 376,337 kg.

- 5 A Farm Environment Plan shall be prepared in accordance with Schedule Two for each property within NMG-CRC143288. For properties listed in Schedule One the Farm Environment Plan shall be completed prior to 1 January 2015. The Farm Environment Plan shall be updated as necessary and on farm practice shall be in accordance with the Farm Environment Plan. A copy of the Farm Environment Plan shall be provided to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager on request.
- 6 The Farm Environment Plan(s):
- a. shall be audited by a Farm Environment Plan Auditor to determine the compliance of the Farm Environment Plan with the provisions of Schedule One and on farm practice with the provisions of the Farm Environment Plan;
 - b. audits shall be undertaken in accordance with Part C of Schedule One. A copy of the audit shall be provided to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager within two months of the audit being completed; and

- c. audits shall occur annually, except that following three consecutive audits graded as fully compliant, the audit frequency shall reduce to at least once every three years. However, if an audit is graded as non-compliant or the manager of the farm changes, then the audit frequency reverts to annual.

- 7 The consent holder shall prepare an annual report including:
 - a. a record of the audit compliance grading for each property audited during the previous 12 months;
 - b. the annual average nitrogen loss to water for each property within NMG-CRC143288, calculated in accordance with Schedule Two; and
 - c. a calculation of the current nitrogen baseline in order to determine compliance with Condition 4.

A copy of the annual report shall be provided to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager by 31 August each year.

Use of water

- 8 Where water is used under this consent concurrently with other consents to use water for irrigation of the same land then the maximum combined application rate shall not exceed 0.7 litres per second per hectare (6.05 millimetres per day).

Advisory note: Properties within NMG-CRC143288 may use water pursuant to this consent only or may use water pursuant to a separate consent to use water. This condition only applies when water is used concurrently pursuant to this consent and a separate consent on the same land.

- 9 The consent holder shall before the first use of water pursuant to this consent:
 - a.
 - i. install a water meter(s) that has an international accreditation or equivalent New Zealand calibration endorsement, and has pulse output, suitable for use with an electronic recording device, which will measure the rate and the volume of water used to within an accuracy of plus or minus five percent as part of the pump outlet plumbing, or within the mainline distribution system, at a location(s) that will ensure the total volume of water used pursuant to this consent, and the volume of water used for irrigation of the same land pursuant to any separate consent (where condition 8 applies), is measured; and
 - ii. install a tamper-proof electronic recording device such as a data logger(s) that shall time stamp a pulse from the flow meter at least once every 60 minutes, and have the capacity to hold at least one season's data of water use as specified in clauses (b)(i) and (b)(ii), or which is telemetered, as specified in clause (b)(iii).

- b. The recording device(s) shall:
- i. be set to wrap the data from the measuring device(s) such that the oldest data will be automatically overwritten by the newest data (i.e. cyclic recording); and
 - ii. store the entire season's data in each 12 month period from 1 July to 30 June in the following year, which the consent holder shall then download and store in a commonly used format and provide to the Canterbury Regional Council upon request in a form and to a standard specified in writing by the Canterbury Regional Council; or
 - iii. shall be connected to a telemetry system which collects and stores all of the data continuously with an independent network provider who will make that data available in a commonly used format at all times to the Canterbury Regional Council and the consent holder. No data in the recording device(s) shall be deliberately changed or deleted.
- c. The water meter and recording device(s) shall be accessible to the Canterbury Regional Council at all times for inspection and/or data retrieval.
- d. The water meter and recording device(s) shall be installed and maintained throughout the duration of the consent in accordance with the manufacturer's instructions.
- e. All practicable measures shall be taken to ensure that the water meter and recording device(s) are fully functional at all times.
- 10 Within one month of the installation of the measuring or recording device(s), or any subsequent replacement measuring or recording device(s), and at five-yearly intervals thereafter, and at any time when requested by the Canterbury Regional Council, the consent holder shall provide a certificate to the Canterbury Regional Council, Attention: Regional Manager, RMA Monitoring and Compliance, signed by a suitably qualified person certifying, and demonstrating by means of a clear diagram, that:
- a. the measuring and recording device(s) has been installed in accordance with the manufacturer's specifications; and
 - b. data from the recording device(s) can be readily accessed and/or retrieved in accordance with clauses (b) and (c) of condition (9).
- 11 The consent holder shall take all practicable steps to:
- a. ensure that the volume of water used for irrigation does not exceed that required for the soil to reach field capacity; and
 - b. avoid leakage from pipes and structures; and
 - c. avoid the use of water onto non-productive land such as impermeable surfaces and river or stream riparian strips.

General

- 12 The consent holder shall ensure that each property within NMG-CRC143288 shall maintain detailed records of fertiliser application rates, location and crop type (including winter feed/forage crops), cultivation methods, stock units by reference to type and breed, and all other inputs to the Overseer, or equivalent, nutrient budgeting model. A copy of these records shall be provided to the Canterbury Regional Council, Attention: RMA Monitoring and Compliance Manager on request.
- 13 The Canterbury Regional Council may, once per year, on any of the last five working days of May or November, serve notice of its intention to review the conditions of this consent for the purposes of dealing with any adverse effect on the environment which may arise from the exercise of this consent.

Issued at Christchurch on 11 June 2014

Canterbury Regional Council

Consent No: CRC143288

Exercising of resource consent

It is important that you notify Environment Canterbury when you first start using your consent.

GRANTED TO: Dairy Holdings Limited
A LAND USE CONSENT: to use land for farming and to use water
LOCATION: Rakaia-Selwyn groundwater allocation zone

Even if the consent is replacing a previous consent for the same activity, you need to complete and return this page.

Providing this information will:

- Validate your consent through to its expiry date
- Minimise compliance monitoring charges
- Help provide an accurate picture of the state of the environment.

If consent CRC143288 is not used before 11 Jun 2019 this consent will lapse and no longer be valid.

Declaration:

I have started using this resource consent.

Action taken: (e.g. pasture irrigated, discharge from septic tank/boiler/spray booth etc).

Approximate start date (*Note: this may be different to the date the consent was granted*): _____

Signed: _____ **Date:** _____

Full name of person signing (please print): _____

Please return to:

**Environmental Protection - Administration
Environment Canterbury
PO Box 345
Christchurch 8140**



Regional Boundaries

Territorial Authority Boundaries

State highways (<1:250,000)

Roads (250,000 - 64,000)

State highways outside Canterbury

NZ Coastline

NZ Background

High : 255

Low : 0

Hydro Area

Hydro Area 250k

Forest

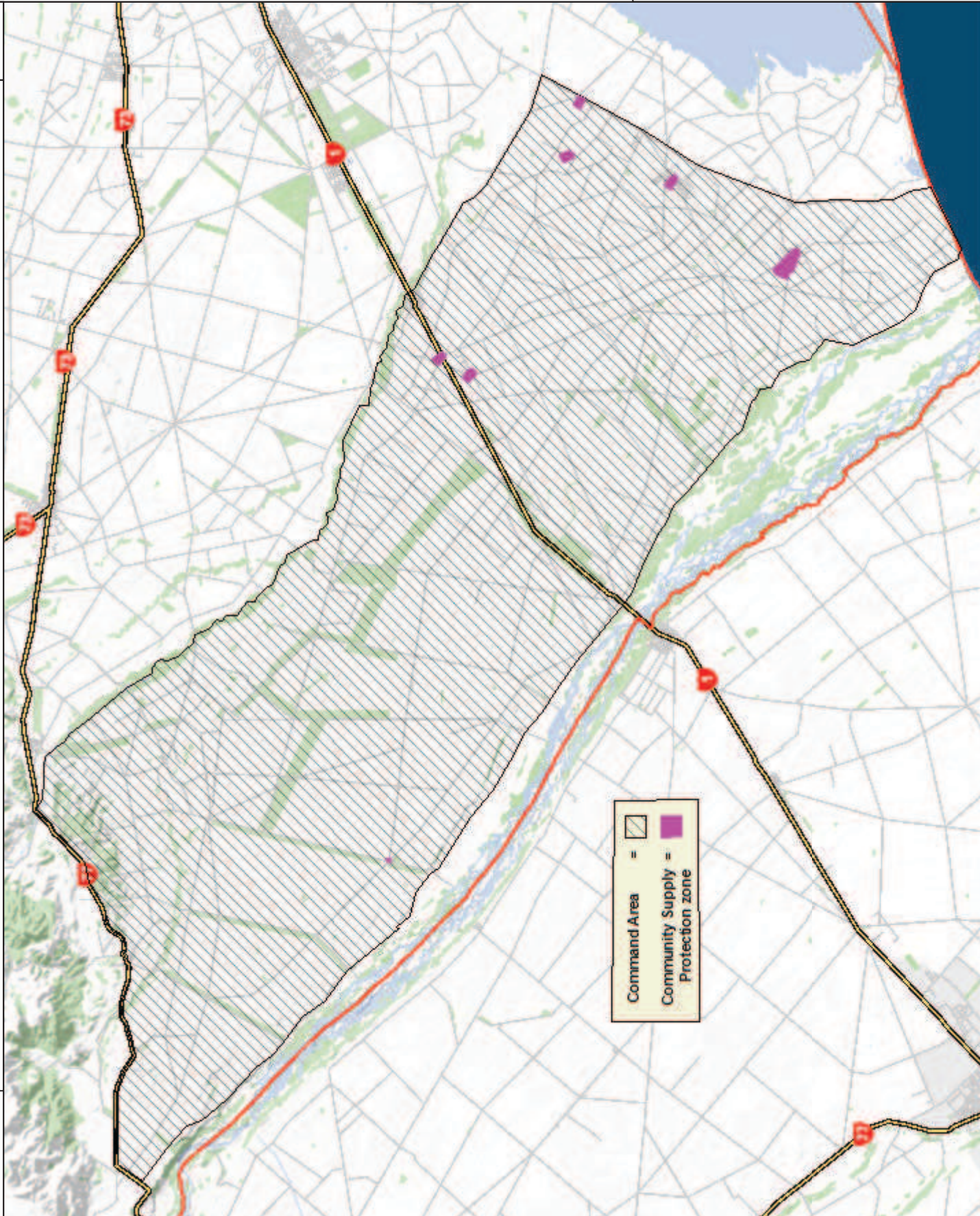
Urban Area

NZ Coastline

Sea Area

Command Area = [diagonal hatching symbol]

Community Supply Protection zone = [purple square symbol]



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Scale: 1:250,000 @A4

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