BEFORE THE CANTERBURY REGIONAL COUNCIL

IN THE MATTER OF	the Resource Management Act 1991
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IN THE MATTER OF	Water permit applications by Lone Star Farms Limited (Godley Peaks Station)

STATEMENT OF EVIDENCE OF GEORGE ROBERT GLOVER
DATED 20 NOVEMBER 2009

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1 My name is George Robert Glover, commonly called Rob Glover and I am the Manager of Godley Peaks Station ("the Station"), a 14,576 hectare property on the Western shores of Lake Tekapo.

2 I have 40 years of practical farming experience as a professional Farm Manager in addition to four years in farm finance. In 1991 I was the runner-up for the Lincoln Foundation Award in Farm Management.

3 I was appointed Manager of the Station in November 2001. I have managed the Station continuously since my appointment, experiencing its many climatic variations.

BACKGROUND

4 The Station is owned by Star Holdings Limited, and operated through a subsidiary company – Lone Star Farms Limited ("LSF").

5 The Station consists of 14,493 hectares of pastoral lease and 83 hectares freehold land. Approximately 11,700 hectares of the Station is hill country, most situated above 1,100 metres above sea level. The remaining 2,800 hectares has been developed through over sowing and top dressing.

6 In the early 1970's previous owners developed an area of irrigation. This resulted in the modification of approximately 700 hectares through a combination of direct drilling, a limited amount of cultivation and an extensive fencing program.

7 The Station has the benefit of resource consent CRC012408.1 ("the Historic Consent") that enables us to divert 85 l/s and take 72 l/s for irrigation purposes from the Mistake River.

8 The Historic Consent was first granted as a water right in the early 1970's and was renewed on 14 September 2001 in the name of Godley Peaks Station 1995 Limited. On 16 June 2006 it was transferred to Star Holdings Limited and it remains valid until 1 January 2036.

9 Current ownership of the Station commenced late in 2001, followed shortly after by my appointment as Manager. For the first twelve months of ownership the existing irrigation system was used. This consisted of two early vintage water winch machines whereby water was delivered to the system through an asbestos/cement underground ring main by gravity.

10 Although the initial system was efficient when installed, it became increasingly apparent to me that it was reaching the end of its build life and had severe limitations in the uniformity of its application. It was also clear that the Station would benefit from further irrigation and we implemented an upgrade of the system.

11 Stage One of the upgrade was commissioned in December 2003. Main lines were replaced and relocated, the water delivery machinery was modernised, data loggers installed in the delivery pipe. Aquaflex recorders were also installed for moisture and soil temperature recording on six sites with suspected different soil types.

12 Stage Two was commissioned in November 2006 with the installation of a centre pivot which enabled us to irrigate an area of 225 hectares with a combination of pivot and hard hose guns.

13 In 2005 we implemented a monitoring system whereby soil field capacity was tested on four sites and water quality was tested on five sites on a six monthly basis. A flow meter was also installed in the Mistake River in November 2005 to record year round flows.

THE CURRENT APPLICATION

14 We lodged a further application for consent in respect of irrigation activities on the Station in February 2003, the review process of which has lead to the current application being considered today.

15 From the time of first lodging the application for consent the design has been amended a number of times. Because open water races were frowned upon in the WCWARP and there is a recommendation for stock water to be piped, LSF has applied for and been granted a consent to install a gallery for water take. LSF has also withdrawn those consent applications for discharge to and diversion of the Mistake River.

16 The current application is for the irrigation of an additional 447 hectares to that covered by the Historic Consent and water shares have been purchased from MIC for this area.

17 In the past our irrigation season has typically run for approximately 120 days from October through to April, although we have applied for an irrigation timeframe of 212 days to allow for the vagaries of a farming season. I hope that by using the approved gallery water take system, fully piped and monitored, coupled with the Station's existing Aquaflex records which dictate exactly when water is required, the Station will be able to very efficiently apply irrigation when and where it is most needed.

DESCRIPTION OF APPLICATION

18 We propose the following:

(a) To take water from the Mistake River at a maximum rate not exceeding 261 litres per second (l/s), and a volume not exceeding 22,550 cubic metres per day. 2,682,000 cubic metres per annum will be required.

(b) To abstract water from the river via a fully piped under stream gallery to gravity feed spray irrigators for the irrigation of 447 hectares of pasture and forage crops.

(c) To install a telemetry capable in line flow recorder to record take for the proposed consent and the current consent both of which will operate through the same gallery.

(d) To maintain an existing Trutrack automatic water level recorder, convert to telemetry capable and relocate to most practicable site as close to the intake point as is possible.

(e) To reduce application on a stepped regime of irrigator capacity according to flow in Mistake River.

(f) To cease abstraction when the flow in the Mistake River falls below the MALF of 520 l/s.

(g) To use a combination of centre pivot irrigators and hard hose guns.

(h) To have allowance to irrigate over the period October – April, being 212 days.

(i) To ensure an on-farm system capacity of 5mm per day and a return period of four to nine days is adhered to through the use of existing Aquaflex data loggers.

(j) To ensure that gross application rate is less than half the water holding capacity of the soil in each irrigation return period.

THE STATION ENVIRONMENT

The Mistake River ("the River")

19 The River is fast flowing, snow fed, and has extremely variable flow rates especially in spring, summer and autumn. Winter flows are minimal due to the River freezing at its source and Mean Annual Low Flow (MALF) is reduced because of this.

20 The proposed irrigation season does not run during the winter months when the River is at its usual time of minimal flow.

Rainfall

21 Mean annual rainfall at the top of the Mistake River catchment is approximately 3200mm, and 1000mm at the lower end of the catchment with a mean of 2000mm, based on rainfall maps in Waitaki water and soil resources management plan - volume 2 - the area intended for irrigation at the southern most end of the Hall range receives considerably less based on rainfall data collected over the past seven years.

22 On calendar year, records kept at Godley Peaks Station show the following:

(a)	2003	602 mm
(b)	2004	719 mm
(c)	2005	549 mm
(d)	2006	783 mm
(e)	2007	478 mm
(f)	2008	674 mm
(g)	2009	697 mm to date (of which 345 mm fell in April May).

643 mls average for calendar year.

23 Over the same period of seven years average monthly rainfall during the irrigation period are shown below:

(a)	October	44 mm
(b)	November	41 mm
(c)	December	49 mm
(d)	January	32 mm
(e)	February	47 mm
(f)	March	26 mm
(g)	April	42 mm

281 mm per 7 month average

24 When evapotranspiration rates are factored, in the Station shows a considerable moisture deficit.

Soils

25 During my time at the Station I have attempted to develop the most environmentally acceptable and sustainable approach to re-grassing and fodder crop establishment. The most effective approach is currently chemical application and crop establishment by direct drilling to maximise soil moisture retention and minimise wind erosion from ploughed paddocks.

26 Results from irrigation on the Historic Consent have been excellent. I have also arranged for soil moisture holding capacity tests to be completed on the four different soil types contained in the Station's more intensively developed areas by Dr Tony Davoren.

Land Use

27 All of the proposed irrigable 447ha has been developed over the past eight years. This development comprised the increase of carrying capacity and fertiliser applications in accordance with best practice, which included water quality sampling by Cawthron Labs.

28 Godley Peaks Station currently winters Merino sheep and beef cattle, and during the summer trades lambs and beef steers. As time elapses a significant reduction in winter forage cropping is budgeted for with just a seven year renewal of pasture aimed at. This will entail a pasture to crop to pasture regime of approximately 80 hectares per annum.

Surface Water

29 There is an existing stock water race system with in the property which will be closed down after the installation of the gallery water take system. Stock water will then be piped to troughs, rather than transported through water.

30 We have agreed with the Department of Conservation ("DoC") that the levels of Mick's Lagoon will be maintained via our irrigation infrastructure. For this to occur it will be necessary for DoC to apply for consent to take water from the River for this purpose. I understand that this is currently occurring and DoC have written to Environment Canterbury to confirm that an application will be lodged.

Farm Management

31 Godley Peaks winters 5000 Merino breeding ewes (5,000 Stock Units (SU)), 2,100 Merino adult wethers (1,680 SU), 1,850 Merino ewe hoggets (1,850 SU), 1,850 Merino ewe hoggets (1,480 SU), plus rams and killers amounting to approximately 150 head (150 SU). The total sheep SU therefore amounts to 10,160.

32 330 beef breeding cows (1,800 SU), 10 sire bulls (650 SU), 140 yearling heifers (560 SU), 140 yearling steers (560 SU), and on occasion up to 50 rising 2 year steers (250 SU) are wintered. Total cattle SU amount to 3,230.

33 Combined this equates to 13,390 SU wintered currently and represents a sustainable stocking rate, this has been retrenched slightly from a stocking high of 14,500 SU two seasons ago.

34 For the past five years during the late spring to early autumn period a further 5,000 trading lambs have been purchased in three timed splits and have been finished to export weight.

35 Of the sheep wintered on irrigation, ewes spend approximately 40 days over the tupping period rotating around the irrigation command area. Both sex's of hoggets are on irrigable ground from June through September. This consists of grassing lucerne for the first 30 days and then crop (typically kale) that is in the regrassing rotation for approximately 90 days.

36 The number of cattle on irrigable ground depends on where crop rotations for regrassing are situated. Steers and heifers are the only cattle that receive crop, whether grown under irrigation or dryland conditions.

37 Merino adult wethers and breeding cows winter on tussock block in Godley Valley.

38 The feed demand summary set out in Table 1 indicates approximate grassing times per class for irrigated land currently.

39 It is envisaged that capital stock numbers will only vary marginally with added irrigation if at all. The economics of running Merino breeding ewes under pivots is marginal on an all year round basis and the constraints of classes of land outside the irrigable area suitable for breeding ewes dictates that ewe numbers have reached an optimum level. The same comments apply to the beef breeding herd.

Table 1: Feed demand summary for improve, irrigated land at Godley Peaks

Class	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Merino Ewes								5000				
½ bred Ewes												
Merino replacements												
- wethers	600											
- ewes	1300											
Trading hoggets Wth	1950											
Trading hoggets ewe												
	1200											
Merino lambs						5250						
Trading lambs				5000								
Cows												
R.2 Steers		50										
Heifer calves	140											
Steer calves	140											
Wethers cull		400										
Hay & silage (Lucerne)	100 – 130 ha			30-60								
Winter feed/regrassing												

Note: Dark colour – definite demand. Light colour – possible demand if feed allows.

40 In Table 1 as irrigable area increases with the additional water consent, the figures for trading lambs only will increase over the same calendar period (donated by dark yellow), however the grazing period will remain constant.

41 To enable the above to work, fertiliser and lime applications are needed.

42 Our aim is to have Olsen P levels on irrigable country of between 18 and 24 with a pH of between 5.7 and 6.0.

43 My experience to date indicates that applications of Phosphate on irrigable land at the Station is approximately one spring application of Sulphur Super 20 at the rate of 250 kg of product or 20 units of Phosphate, 51 units of Sulphur and 45 units of calcium per hectare annually.

44 Two applications of Nitrogen to the Station per annum is also normal, the first typically in December. The second application is dependent on soil temperature but usually occurs in March or April This is applied at the rate of 80 kg per ha of product or 35 units of Nitrogen per ha per application.

45 Applications of Lime are dependant on soil test results and are applied on an 'as needed' basis.

46 Fertiliser requirements are monitored by transect line on several sites annually and fertiliser is applied as recommended by soil testing carried out in May each year.

47 All permanent grassed areas receive this broad template application, except where paddocks are earmarked for renewal. Dependant on soil testing results some special mixes may be used for crop establishment.

48 To date I have established kale crops by way of a direct drill down spout with seed and 100kg of Cropmaster D.A.P (18 units Nitrogen, 20 units of Phosphate, and 1 unit of Sulphur). This is followed at six weeks after striking with a further 100 kg/ha of the same mix with boron added at 15 units per ha. This is followed with an application in early autumn of 35 units of nitrogen.

49 Over the past 5 years approximately 20ha of kale per annum has been established on irrigable land. I envisage that a need will arise to renew grass on a 7-10 year basis. If irrigable Lucerne is excluded from the 560 ha that will receive water, we will need to renew approx 40 ha of grass per annum.

General

50 In my capacity as Farm Manager I have consistently worked to improve the economic viability of the Station following 'best practice' which includes continual monitoring of water quality, soil health in addition to the tests mentioned earlier in my evidence. As a result, all of the proposed irrigable 447 hectares has been developed over the past eight years with an increase in stock carrying capacity and fertilizer applications.

51 The intention for the Station is that stock units carried over the important winter period would not alter significantly. The additional feed provided by the irrigation over the summer and autumn would go towards increasing per head performance of capital stock, and the balance of additional feed would be applied towards an increase in summer trading stock (November to April).

Landscape

52 The Station has been extensively modified for some time and as such presents a working landscape with continual extensive changes across the farming calendar. The only external point from which these changes are visible is the Lilybank Road (a distance of some 6 - 7 kilometres across the lake).

53 A pivot irrigator or fence is no more offensive to me than the pylon system that was imposed on this area a number of years ago.

54 At Godley Peaks Station it is common practice to stay away from water bodies either when irrigating, fertilizing or direct drilling and this practice will be written into our Farm Management Plan.

55 Godley Peaks Station has stated in the FEMP that we shall fence stock out of water bodies. That has nearly been completed in the lower reaches of the Mistake River at considerable expense to our farming operation. Many of these areas are boundary fences with Government agencies and as such fall under the Fencing Act.

CONSULTATION

56 Two on site meetings have been conducted with members from Te Rūnanga o Arowhenua and Te Rūnanga o Ngāi Tahu ("Ngai Tahu"), in 2003 and on 12 August 2009.

57 Ngai Tahu wished to ensure that Rapuwai and Mick's Lagoon were maintained and protected. Mick's Lagoon is on DoC land but as a result of this consultation

LSF have agreed to ensure that their fencing setback plan includes Rapuwai Lagoon, riparian planting will also be carried out around Rapuwai Lagoon over the next two years.

58 Ngai Tahu have indicated that if the protection measures set out in paragraph 57 are implemented they will support the Current Application.

59 Since 2003 consultation about the application has been undertaken with Fish and Game. A letter was obtained on 28 April 2003 giving conditional approval for the proposed activity, a copy of which is attached at Appendix A.

S42 REPORT

60 I wish to clarify that Godley Peaks Station has no desire to abstract water from Station stream but does wish to abstract from the Mistake River.

61 To my knowledge there are no other consent holders or applications for consent for take from the Mistake River

George Robert Glover
20 November 2009