



**Compilation of Lincoln University Water Quality
Monitoring Data for Lake Ellesmere/Te Waihora
Catchment: 1993-2011**

Summer Scholarship Report

WCFM Report 2012-001

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TITLE: **Compilation of Lincoln University Water Quality Monitoring Data for Lake Ellesmere/Te Waihora catchment 1993 - 2011**

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Executive Summary

This report outlines the development of a database to house all of the water quality that has been collected by Lincoln University's Department of Environmental Management or associated groups; Waterwatch and Lincoln Envirotown Trust, over the period 1993-2011. The database itself is available as a Microsoft Excel spreadsheet, and is partly reproduced in hardcopy in the appendices of this report. Data include; location, weather conditions, flow, temperature, pH, conductivity, total dissolved solids, total hardness, dissolved oxygen, dissolved carbon dioxide, soluble and total phosphate, nitrate and total nitrogen, ammonia, turbidity, suspended solids, oxygen demand and microbiology (mainly faecal coliforms & E. Coli). Some macro-invertebrate data is available, but has not been included due to inconsistencies in measurement methodology and reporting. A detailed description of the data and how it has been derived is included, as well as examples of how the data can be used to show temporal and spatial trends.

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Section 1 Introduction

1.1 Background

Since 1993, Lincoln University students have undertaken comprehensive and routine water quality sampling of rivers and streams in the Lake Ellesmere-Tai Waihora catchment, Selwyn District, New Zealand. More recently, systematic sampling of some of these tributaries has been undertaken by the primary school water quality education programme, Waterwatch, and the community group, Lincoln Envirotown Trust.

This data has been stored in various forms and locations and has not been easily accessible for use by other parties who may be interested in water quality and the health of the lake. The value of the data has been identified as an important baseline against which the benefits of any water quality restoration efforts can be assessed, particularly in light of the recently developed Whakaora Tai Waihora restoration plan. It is critical that the environment is adequately characterised before restoration work begins, or restoration efforts may be misdirected or in vain.

Therefore, in order to provide a useable and accessible baseline dataset for water quality all available data has been compiled into a single electronic database. It is hoped that this database will provide a valuable contribution to the understanding of the water quality of Lake Ellesmere-Tai Waihora, as well as a means to assess any future improvement in the lake's health.

1.2 Database

The database has been prepared as an electronic file in Microsoft Excel® and should be read in conjunction with this report. The following chemical and physical parameters have been included in the database:

- a) location (easting and northing co-ordinates using New Zealand Transverse Mercator system (**NZTM**))
- b) weather conditions (wind direction and velocity, rain (if any) in the previous 48 hours)
- c) stream flow
- d) water temperature
- e) pH
- f) conductivity (salinity)
- g) total dissolved solids
- h) total hardness
- i) dissolved oxygen (mg / L and saturation %)
- j) dissolved carbon dioxide
- k) soluble phosphate (PO_4) and total phosphate

- l) nitrate ($\text{NO}_3\text{-N}$) and total nitrogen
- m) ammonia (NH_3)
- n) water clarity as “turbidity” (nephelometric turbidity units)
- o) solids (total solids, non-volatile solids, volatile solids and total suspended solids or non filterable solids)
- p) oxygen demand (biological and chemical) and
- q) microbiology (coliforms, E. coli, salmonella and other gram negative bacteria).

Please note that not all data sources have results recorded for each parameter. Parameters available for some sites but not others should be accounted for accordingly in any subsequent data analysis. Macroinvertebrate data has not been included in this database, due to the difficulty in categorising results in a systematic and numerical way. Furthermore, the methods used by students to measure macroinvertebrates tended to be subjective and open to more errors than those used to measure chemical or physical parameters, thereby compromising the validity and utility of the results.

Section 2 Methodology

2.1 Data Sources

2.1.1 Accuracy and Reliability

The data has been transcribed directly from the various data sources. Every effort has been made to ensure accuracy and the data has only been adjusted where obvious errors have been made (for example, where obviously incorrect units or orders of magnitude have been recorded). If a result has been identified as possibly inaccurate this has been highlighted in red in the spreadsheet.

However, it cannot be guaranteed that methodological or calculation errors have not been included in the results from which the data is derived. Student exercises are generally group learning experiences and therefore individual results can be prone to inaccuracies and difficult to verify. The collection methodologies used by each group have been described at Section 2.2.

2.1.2 Lincoln University courses

Most data has been collected by students undertaking one of two Lincoln University undergraduate courses, Environmental Monitoring and Resource Assessment (ERST 203) and Monitoring and Management of R Systems (ERST 311) and one postgraduate course, Advanced Environmental Monitoring (ERST 611). Previous Lincoln University courses from which some results have been derived include natural resources engineering codes ENNR 303 and ENNR 350 and environment and resource studies codes ERST 336, ERST 601 and ERST 605.

Additional data has been included from a 2011 Lincoln University thesis by Kathryn Collins, "Benefits of riparian planting: a case study of lowland streams in the Lake Ellesmere catchment", submitted as part of the requirements of a Master of Resource Studies.

2.1.3 Other Groups

Waterwatch

Waterwatch is an interactive programme designed to involve school students and community groups in monitoring their local Rs or streams. It is part of the ISAAC Centre for Nature Conservation, Lincoln University. The programme has accumulated its own database of monitoring results and this has now been incorporated in this database.

Lincoln Envirotown Trust

The Lincoln Envirotown Trust has undertaken limited chemical and physical testing of the Liffey Stream within the Lincoln township for the past five years. This data is available from their website (www.lincolnenvirotown.org.nz), and is now incorporated into this database.

2.1.4 Excluded Data

Environment Canterbury (ECan) and Selwyn District Council have their own data of water monitoring results in this catchment. It was decided at the outset of this database project not to seek to include any of this data, as maintenance of, and access to, the data is already being consistently managed by these authorities.

2.2 Analysis methodologies

The following instruments and techniques were used to gather data throughout 2010 and 2011. While other methodologies may have been used in earlier years, it is recommended that these be used as standard for additional collection of data, to ensure consistency going forward. Methods are either *in situ* or *ex situ*, as stated.

Table 1 Analysis methods 2010/2011

Parameter	Instrument/technique used
Easting and northing co-ordinates	Garmin hand held GPS, NZTM system, measured <i>in situ</i> .
Weather conditions	<i>In situ</i> observations. Rainfall data, where included, was obtained from the Lincoln weather station.
Stream flow	Global flow type probe sampling, undertaking multiple readings across tributary, measured <i>in situ</i> .
Temperature	Self-calibration portable meter model no. HACH HQ40d, measured <i>in situ</i> .
pH	Calibrated (pH7.0) Shindengen ISFET pH meter KS701, measured <i>in situ</i> .
Conductivity	HACH CDC401 electrical probe, measured <i>in situ</i> .
Total dissolved solids	Calculation from conductivity (TDS = 0.64 x conductivity).
Hardness	HACH method 8226, ManVer2 Burette Titration, measured <i>ex situ</i> .
Dissolved oxygen	Self-calibration portable HACH HQ40d meter and with luminescence technology electrode, measured <i>in situ</i> .
Carbon dioxide	HACH method 8233, Burette Titration using NaOH yielding total dissolved carbonate, measured <i>ex situ</i> .
Phosphate	Colorimetry using HACH DR890 meter; HACH method 8048 using Ascorbic Acid sachets, measured <i>ex situ</i> . Total phosphate measured using same method after persulphate digestion.
Nitrate	Colorimetry using HACH DR890 meter; HACH method 8171 using Cadmium Reduction sachets, measured <i>ex situ</i> . Total nitrogen measured using same method after persulphate digestion.
Ammonia	HACH method 8038 (Nessler method) measured <i>ex situ</i> .
Water clarity	HACH DR/890 meter or MERCK Turbiquant 1000IR, measured <i>in situ</i> .
Solids	Total solids: HACH method 8271 (Gravimetric method) measured <i>ex situ</i> . Total suspended solids: HACH method 8158 (Gravimetric method) measured <i>ex situ</i> . Non volatile and volatile solids: HACH method 8158 (Gravimetric method) measured <i>ex situ</i> .
Oxygen demand	BOD: HACH method 10099 (respirometric), COD: HACH method 10067 (manganese III). Both measured <i>ex situ</i> .
Microbiology	MERCK brand chromocult coliform agar method. All measured <i>ex situ</i> .

2.3 Sites

2.3.1 Site descriptions

Table 2 displays the summarised site descriptions from all data sources. The reference code is an abbreviation of the site name and refers to the site location as shown on the relevant map. The map reference refers to the relevant map number contained in the Appendices.

2.3.2 Site locations

Site locations are shown by the reference code in Table 2 on the thirteen maps included in the Appendices. Each location has been hyperlinked to the relevant map.

Figure 1 shows a map of the Lake Ellesmere-Te Waihora catchment that sets out the general area of each map number reference, also with hyperlinks.

Table 2 Site descriptions *Note that “D/s” and “U/s” are abbreviated to D/S and U/S in the Appendix Tables

Site Name	Easting	Northing	Code	Lake Tributary	Map #	Description
LII Spring	1559410	5167300	A1	LII R	Map 1	Source of LII R. Access from property at 491 Edward Street, Lincoln.
Moirs Lane Bridge	1559210	5166390	A2	LII R	Map 1	LII R measured from north side of bridge on Moirs Lane, Lincoln.
Liffey Stream D/s*	1559100	5166350	A3	LII R	Map 1	Liffey Stream measured from 20m U/s of confluence with LII R.
LII D/s Liffey	1559110	5166300	A4	LII R	Map 1	LII R measured from 20m D/s of confluence with Liffey Stream
Moirs Farm Ditch 4	1559030	5166100	A5	LII R	Map 1	Farm ditch 300m south of Moirs Lane, measured from 100m U/s of confluence with LII R.
McDonald Rd Bridge	1558150	5164160	A6	LII R	Map 2	LII R measured from north side of bridge on McDonald Rd, Lincoln.
Sergeants Rd Drain	1556510	5163820	A7	LII R	Map 2	Drain measured from east side of Sergeants Rd, 20m north of intersection with Goodericks Rd, Lincoln.
Liffey Stream U/s	1558950	5167150	A8	LII R	Map 1	Liffey Stream measured from south side of bridge on Southfield Drive, Lincoln.
Liffey Stream Lincoln	1558470	5168200	L1	LII R	Map 1	Liffey Stream measured from south side of North Belt, Lincoln.
Springs Creek Spring	1557860	5166510	B1	LII R	Map 1	Source of Springs Creek. Access from [Chudleigh] farm on Springs Rd, Lincoln.
X-Drain	1558800	5166000	B2	LII R	Map 1	Farm drain measured from 20m U/s of intersection with Springs Creek, 100m U/s from confluence of Springs Creek with LII R
Springs Creek	1558850	5165980	B3	LII R	Map 1	Springs Creek measured from 50m U/s of confluence with LII R.
LII U/s Springs Creek	1558930	5166010	B4	LII R	Map 1	LII R measured from 40m U/s of confluence with Springs Creek.

Site Name	Easting	Northing	Code	Lake Tributary	Map #	Description
LII D/s Springs Creek	1558930	5165950	B5	LII R	Map 1	LII R measured from 20m D/s of confluence with Springs Creek.
Coes Ford U/s	1552100	5161840	C1	Selwyn R	Map 3	Selwyn R measured from 50m U/s of confluence with Silverstream (600m U/s from Coes Ford, The Lake Rd, Lincoln).
Silverstream	1552140	5161870	C2	Selwyn R	Map 3	Silverstream measured from 50m U/s of confluence with Selwyn R.
Coes Ford D/s	1552200	5161800	C3	Selwyn R	Map 3	Selwyn R measured 50m D/s of confluence with Silverstream (500m U/s from Coes Ford, The Lake Rd, Lincoln).
Coes Ford	1552800	5161740	C4	Selwyn R	Map 3	Selwyn R measured 100m D/s of Coes Ford (Rd ford), The Lake Rd, Lincoln.
Moirs Farm Ditch 1	1559300	5166370	D1	LII R	Map 1	Farm ditch on Moirs Farm measured from 50m U/s of confluence with LII R. Ditch runs parallel with Moirs Lane on south side.
Moirs Farm Ditch 2	1559280	5166290	D2	LII R	Map 1	Farm ditch on Moirs Farm measured from 50 metres U/s of confluence with LII R. Ditch is the long ditch for effluent treatment that is directly to the west of the dairy shed and concrete pad.
Moirs Farm Ditch 3	1559260	5166220	D3	LII R	Map 1	Farm ditch on Moirs Farm measured from 50 metres U/s of confluence with LII R. Ditch is 80m south of Moirs Farm Ditch 2.
U/s Moirs Lane	1559250	5166460	D4	LII R	Map 1	LII R measured from 30m U/s of bridge on Moirs Lane, Lincoln.
D/s Moirs Lane	1559150	5166330	D5	LII R	Map 1	LII R measured from 30m D/s of bridge on Moirs Lane, Lincoln. NB: Situated D/s of confluence of Moirs Farm Ditch 2 with LII R. Moirs Farm Ditch 2 has historically been a dairy farm effluent outfall.

Site Name	Easting	Northing	Code	Lake Tributary	Map #	Description
Upper Halswell R	1563080	5165580	E1	Halswell R	Map 4	Halswell R measured from bridge connecting Lincoln-Tai Tapu Rd and Perymans Rd, Tai Tapu.
Lower Halswell R	1565520	5157750	E2	Halswell R	Map 5	Halswell R measured from bridge on Ridge Rd, Motukarara.
Harts Creek 1	1547140	5150320	H1	Harts Creek	Map 6	Harts Creek measured from bridge on driveway of 31 Lower Lake Rd, Leeston (at intersection of Lower Lake Rd and Timber Yard Rd).
Harts Creek 2	1547400	5150670	H2	Harts Creek	Map 6	Harts Creek measured 600m D/s from H1.
Harts Creek 3	1543520	5150070	H3	Harts Creek	Map 6	Harts Creek measured from north side of Lochheads Rd, Leeston.
Harts Creek 4	1543830	5149920	H4	Harts Creek	Map 6	Harts Creek measured 300m D/s from H3.
Pannetts Bridge	1555720	5161860	P1	LII R	Map 8	Drain measured from north side of bridge on Pannetts Rd, 50m west of intersection with Yarrs Rd, Springston.
Waikewai 1	1546570	5145730	W1	Waikewai Creek	Map 7	Farm ditch measured from north side of bridge on Southbridge-Sedgemere Rd, adjacent to intersection with McConnells Rd, Southbridge.
Waikewai 2	1547760	5144270	W2	Waikewai Creek	Map 7	Waikewai Creek measured from north side of Pohau Rd, 500m west of intersection with Gullivers Rd, Taumutu.
Waikewai 3	1548270	5144180	W3	Waikewai Creek	Map 7	Waikewai Creek measured on east side of bridge on Gullivers Rd, Taumutu.
Waikewai 4	1548400	5144250	W4	Waikewai Creek	Map 7	Sedgemere Creek measured from north side of Pohau Rd, 100m east of intersection with Gullivers Rd, Taumutu.
Waikewai 5	1548320	5144100	W5	Waikewai Creek	Map 7	Waikewai Creek, 10m D/s from confluence with Sedgemere Creek, Taumutu.
Yarrs Lagoon	1557070	5163300	Y1	LII R	Map	LII R (see co-ordinates for

Site Name	Easting	Northing	Code	Lake Tributary	Map #	Description
1					8	location).
Yarrs Lagoon 2	1556400	5163200	Y2	LII R	Map 8	Drain into LII R (see co-ordinates for location).
Yarrs Lagoon 3	1556040	5162910	Y3	LII R	Map 8	LII R (see co-ordinates for location).
Yarrs Lagoon 4	1555740	5162570	Y4	LII R	Map 8	LII R (see co-ordinates for location).
Yarrs Lagoon 5	1556390	5163360	Y5	LII R	Map 8	LII R (see co-ordinates for location).
Chamberlains Ford	1549450	5162600	F1	Selwyn R	Map 9	Selwyn R measured 30m U/s of Chamberlains Ford, Leeston Rd, Irwell.
Knights Stream	1563690	5172910	K1	Halswell R	Map 10	Knights Stream measured from corner of Trices Rd and Sabys Rd, Halswell.
Boggy Creek 1	1547760	5154900	BC1	Boggy Creek	Map 11	Boggy Creek measured from Volckman Rd, Leeston.
Boggy Creek 2	1546040	5156200	BC2	Boggy Creek	Map 11	Boggy Creek measured from Leeston Rd, Doylestown.
Birdlings Brook 1	1543540	5152620	BB1	Harts Creek	Map 6	Birdlings Brook measured from Beethams Rd, Leeston.
Birdlings Brook 2	1542370	5153620	BB2	Harts Creek	Map 6	Birdlings Brook measured 200m D/s from intersection of High Street and Leeston-Southbridge Rd, Leeston.
Kaituna R 1	1578900	5159500	KR1	Kaituna R	Map 12	Kaituna R measured from approximately 500m east of Rockwood Homestead on Kaituna Valley Rd, Kaituna.
Kaituna R 2	1574760	5156550	KR 2	Kaituna R	Map 12	Kaituna R measured from approximately 800m north of Okana Stream bridge on Kaituna Valley Rd, Kaituna.
Nottingham Stream	1565230	5173710	N1	Halswell R	Map 10	Nottingham Stream measured from public reserve between 502 and 514 Halswell Rd, Halswell.
Selwyn R Coalgate	1515860	5184660	S1	Selwyn R	Map 13	Selwyn R measured from 100m U/s of bridge on Bridge Street, Coalgate.

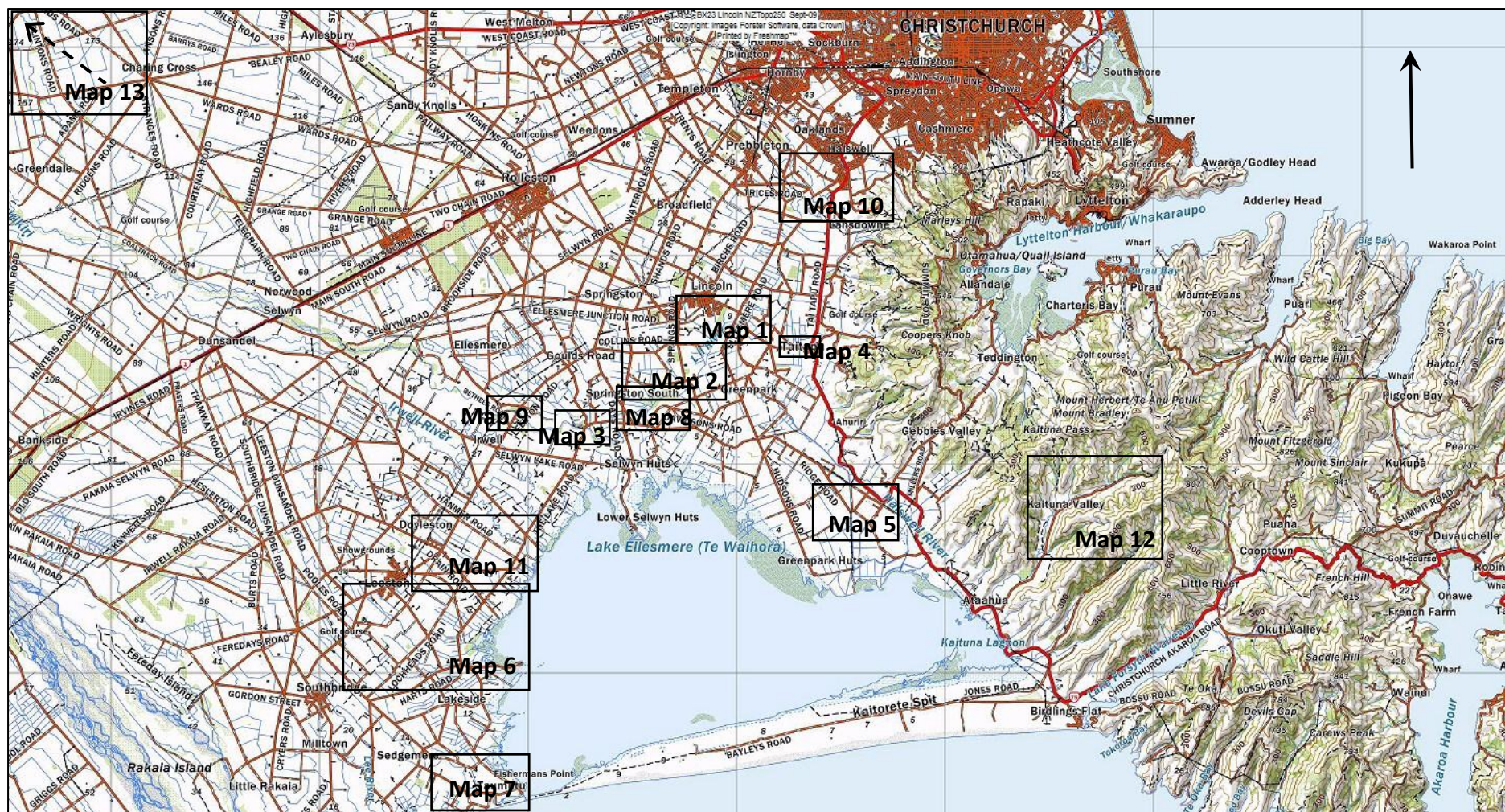
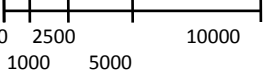


Figure 1 Lake Ellesmere-Te Waihora Catchment

Scale: 10000 metres = 

Key:  : Map area and number reference (hyperlink)

Section 3 The Database

3.1 How to use

The database “LU 1993-2011 Ellesmere catchment database.xlsx” is set up so that there are both compiled data spreadsheet tabs and separate sheet tabs for each data parameter (for example; flow, nitrate or ammonia).

By default data has been ordered from newest to oldest data. This can be altered to order data differently by selecting the data column, and using the MS Excel “sort” function on the drop down arrow in the column heading.

All columns have been formatted with filters, so that only selected data will be shown. For example, the data can be filtered by site or flow or a particular parameter. To clear filters, “Select All”.

3.2 Parameter specifics

3.2.1 Source, date, time, name, reference, easting/northing

The source of the data specifies the Lincoln University courses, theses or other community group data, described in Section 2.1. Date and time is as recorded in the data source, converted to 24-hour format, and the time has been rounded to the nearest hour or half hour. The name of the site has been standardised and has a corresponding reference code as set out in Table 2. Each reference code is located on the relevant map in the Appendix.

The easting and northing co-ordinates assigned to each site have been derived from the location given in the data source. All are given in the New Zealand Transverse Mercator (**NZTM**) system as adopted by Land Information New Zealand (**LINZ**) in 2001. NZTM replaces the New Zealand Map Grid (**NZMG**) as the standard co-ordinate system for general mapping in New Zealand (MapToaster, 2009). All earlier NZMG references have been converted to NZTM. LINZ provides an online utility for this purpose, accessible at <http://www.linz.govt.nz/geodetic/conversion-coordinates/online-conversion-service/index.aspx>.

3.2.2. Weather and Stream Flow

Weather conditions, wind direction and velocity and rainfall (if any) in the previous 48 hours have been transcribed from the data sources, where this information has been included. A low level of standardisation has occurred as set out in Table 3: Stream flow has been recorded in litres per second (L/S) to the nearest litre. This can be converted to cumecs or cubic metres per second (m³/sec) by dividing values by 1000.

Table 3 Standardised weather conditions

Weather	Wind velocity
Fine	None
Partly Cloudy	Light
Overcast	Moderate
Showers	Strong
Rain	

3.2.3 Water Quality Parameters

Water temperature has been recorded in degrees Celsius (°C) to the nearest one decimal place.

pH

pH levels have been recorded to the nearest one decimal place.

Conductivity

Conductivity levels have been recorded in µS per cm (µS/cm) to the nearest one decimal place. These can be converted to salinity if needed.

Total dissolved solids

The level of total dissolved solids (TDS), also calculated from conductivity, has been recorded in milligrams per litre (mg/L) to the nearest one decimal place.

Total hardness

Total hardness (CaCO₃) has been recorded in milligrams per litre (mg/L) to the nearest milligram. This parameter has not been measured by many data sources and therefore results are limited.

Dissolved oxygen

Concentrations of dissolved oxygen (DO) have been recorded in milligrams per litre (mg/L), to the nearest two decimal places, and as saturation percentage (%), to the nearest one decimal place.

Carbon dioxide

The dissolved carbon dioxide (CO₂) (or dissolved carbonate) concentration has been recorded in milligrams per litre (mg/L) to the nearest one decimal place. Limited data is available.

Phosphate and Total Phosphate

Both phosphate (PO₄) and total phosphate concentrations have been recorded in milligrams per litre (mg/L) to the nearest two decimal places. These were measure on unfiltered water samples.

Nitrate and Total Nitrogen

Nitrate (NO₃-N) concentrations have been recorded in milligrams per litre (mg/L) to the nearest two decimal places, and total nitrogen levels have been recorded in milligrams per litre (mg/L) to the nearest one decimal place. Both were measured on unfiltered water samples.

Ammonia

The ammonia (NH₃) level has been recorded in milligrams per litre (mg/L) to the nearest two decimal places. However, this parameter has not been measured often and therefore results are very limited.

Water clarity (turbidity)

Water clarity has been recorded as turbidity in nephelometric turbidity units (NTU) to the nearest two decimal places.

Solids

Total solids, non-volatile (inorganic) solids and volatile (organic) solids have been recorded in milligrams per litre (mg/L) to the nearest one decimal place. The level of total suspended solids (TSS), or non-filterable solids, has been recorded in milligrams per litre (mg/L) to the nearest two decimal places.

Oxygen demand

Biological oxygen demand (BOD) and chemical oxygen demand (COD) have been recorded in milligrams per litre (mg/L) to the nearest one decimal place. Again, these parameters were not measured often and therefore results are very limited.

Microbiology

Four microbiology parameters have been recorded, all in colony forming units (CFU) per 100 millilitres to the nearest unit. The bacteria are coliforms, E. Coli, Salmonella and other gram negative bacteria.

Section 4 Discussion

4.1 Sample graphs

When generating graphs from the database, it is important to select the data required carefully and accurately. Using a separate worksheet for each graph is helpful as data can be copied and pasted into the sheet without interfering with the database formatting.

4.1.1 Graphs from the database

The following graphs are included by way of example to demonstrate how data parameters can be displayed. Four graphs are presented, two scatter graphs showing nitrate and soluble phosphate levels, and two box plots showing E. Coli and conductivity levels, all for different sites.

4.1.2 Nitrate trends with time

Figure 2 shows a scatter graph of nitrate levels ($\text{NO}_3\text{-N}$ in milligrams per litre) recorded at the Coes Ford D/s site (C3 on Map 4) between 2000 and 2005. The trend line indicates a possible increase in nitrate levels over this period.

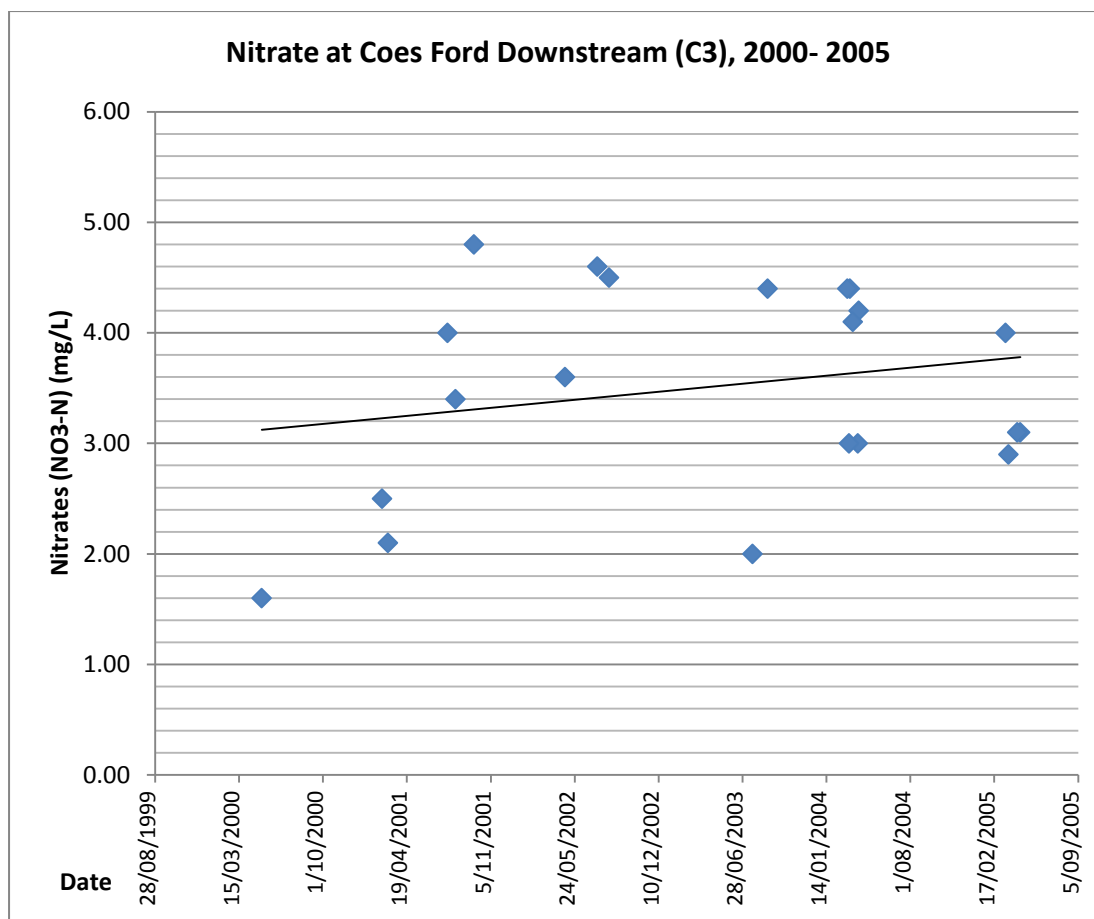


Figure 2 Nitrate levels at Coes Ford D/s

4.1.3 Soluble phosphate trends with time

Figure 3 shows a scatter graph with soluble phosphate levels (PO_4 in milligrams per litre) plotted for three sites on the LII R between 1993 and 2010. The sites are A1 (LII Spring), A4 (LII D/s Liffey) and D5 (D/s Moirs Lane), the location of all being shown on Map 1.

Trend lines have been added for each site. It is difficult to see any consistent change in levels over the period. The apparent increase for site D5 is influenced by a single outlier and is therefore not reliable.

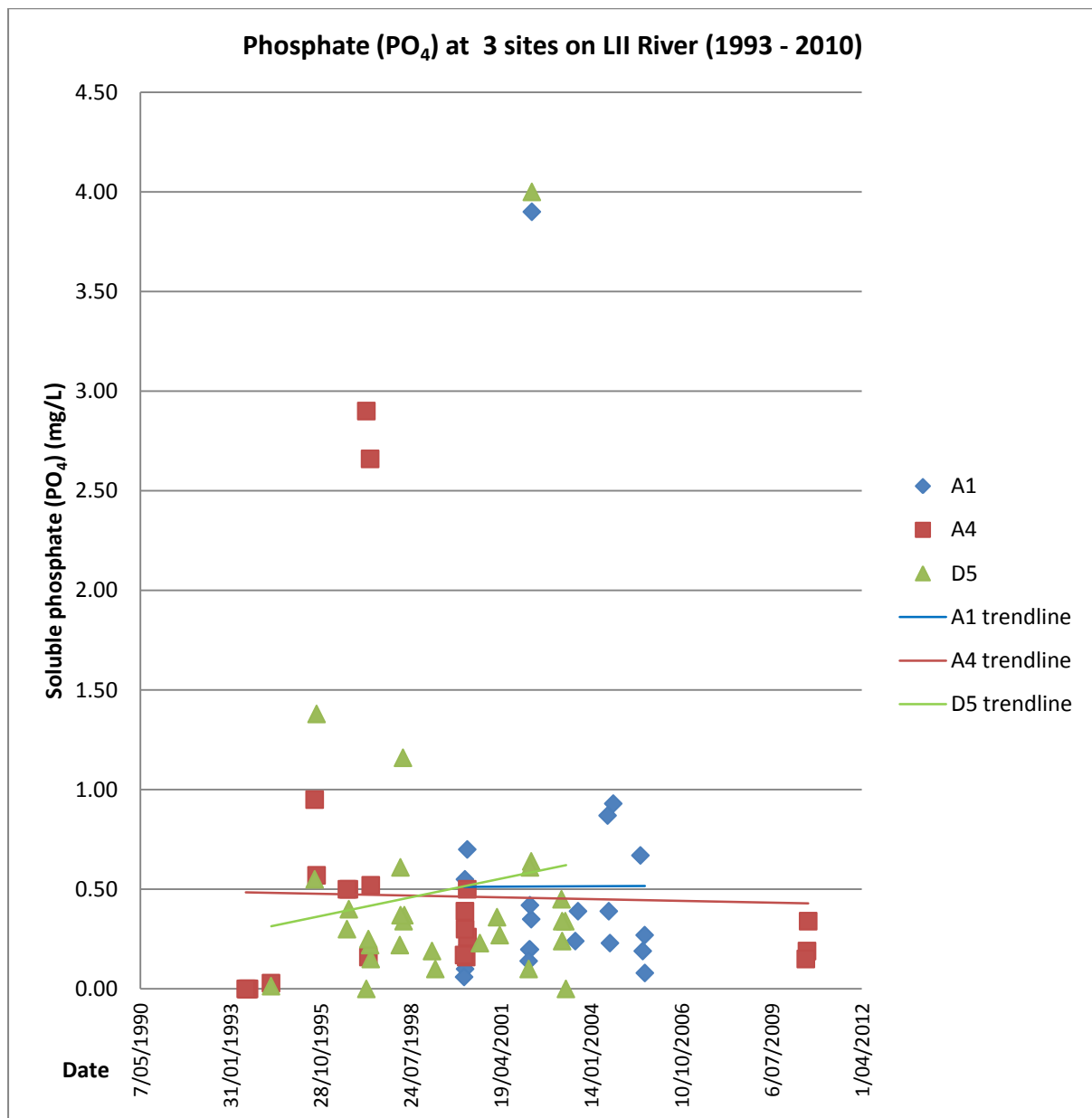


Figure 3 Soluble phosphate levels at three sites on LII R

4.1.4 E. Coli levels at different sites

Figure 4 shows a box plot with E. Coli levels plotted for four sites of Harts Creek, H1-H4 (Harts Creek 1 to Harts Creek 4 as shown on Map 6). The five marks on the box plot show the minimum and maximum levels of E. Coli for each site, as well as the median and lower and upper quartiles (Q1 and Q3 respectively).

The median plots for each site show higher levels at H1 and H2 which are close to Hart Creek's convergence with the lake, than at H3 and H4 which are further U/s.

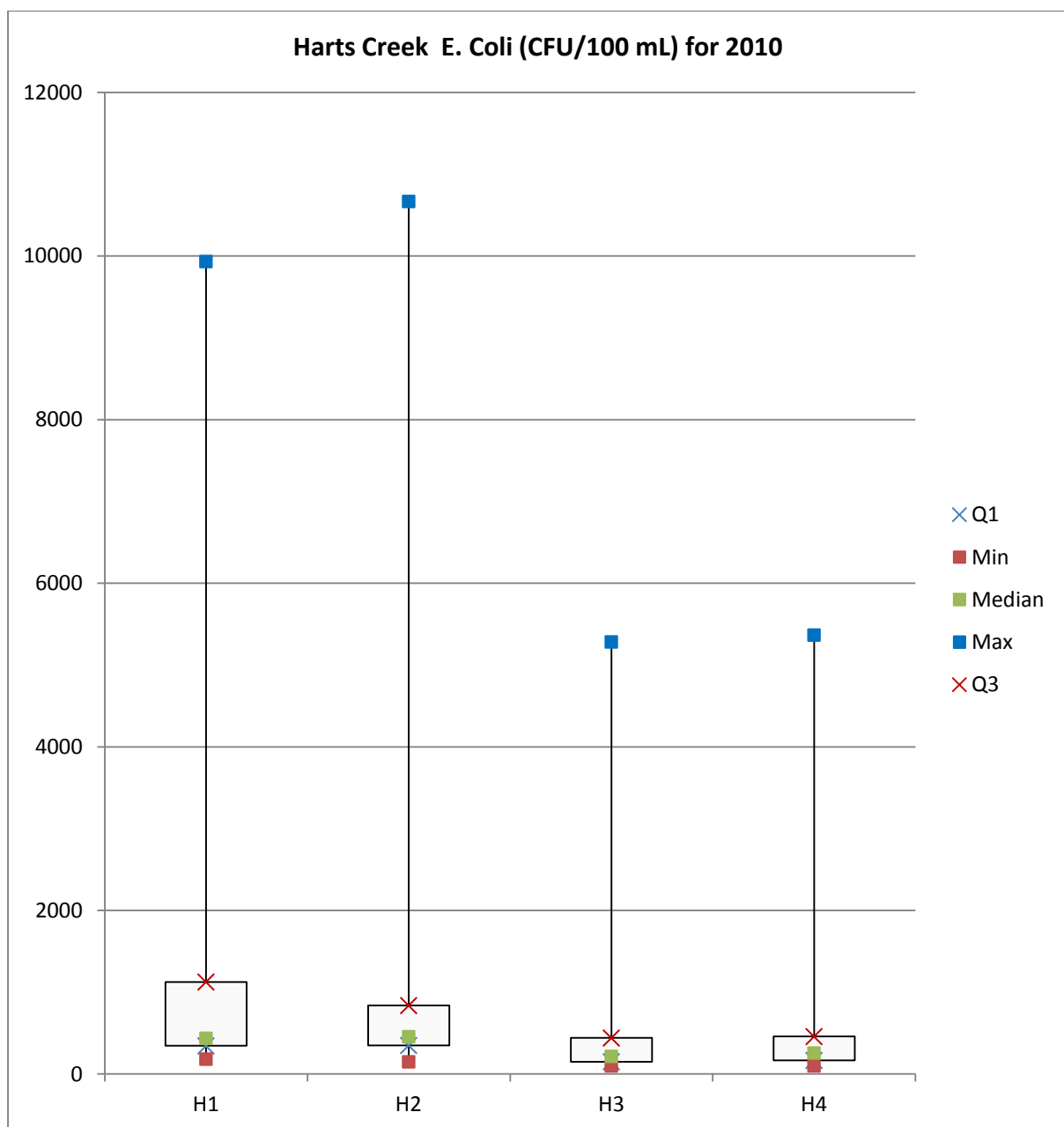


Figure 4 E. Coli levels at Harts Creek

4.1.5 Conductivity levels at different sites

Figure 5 shows the conductivity levels at three sites around Coes Ford, C1, C2 and C3 (Coes Ford U/s, Silverstream and Coes Ford D/s on Map 3). The median levels of conductivity are quite close, however there are higher minimums and maximums recorded for C2 than the other sites.

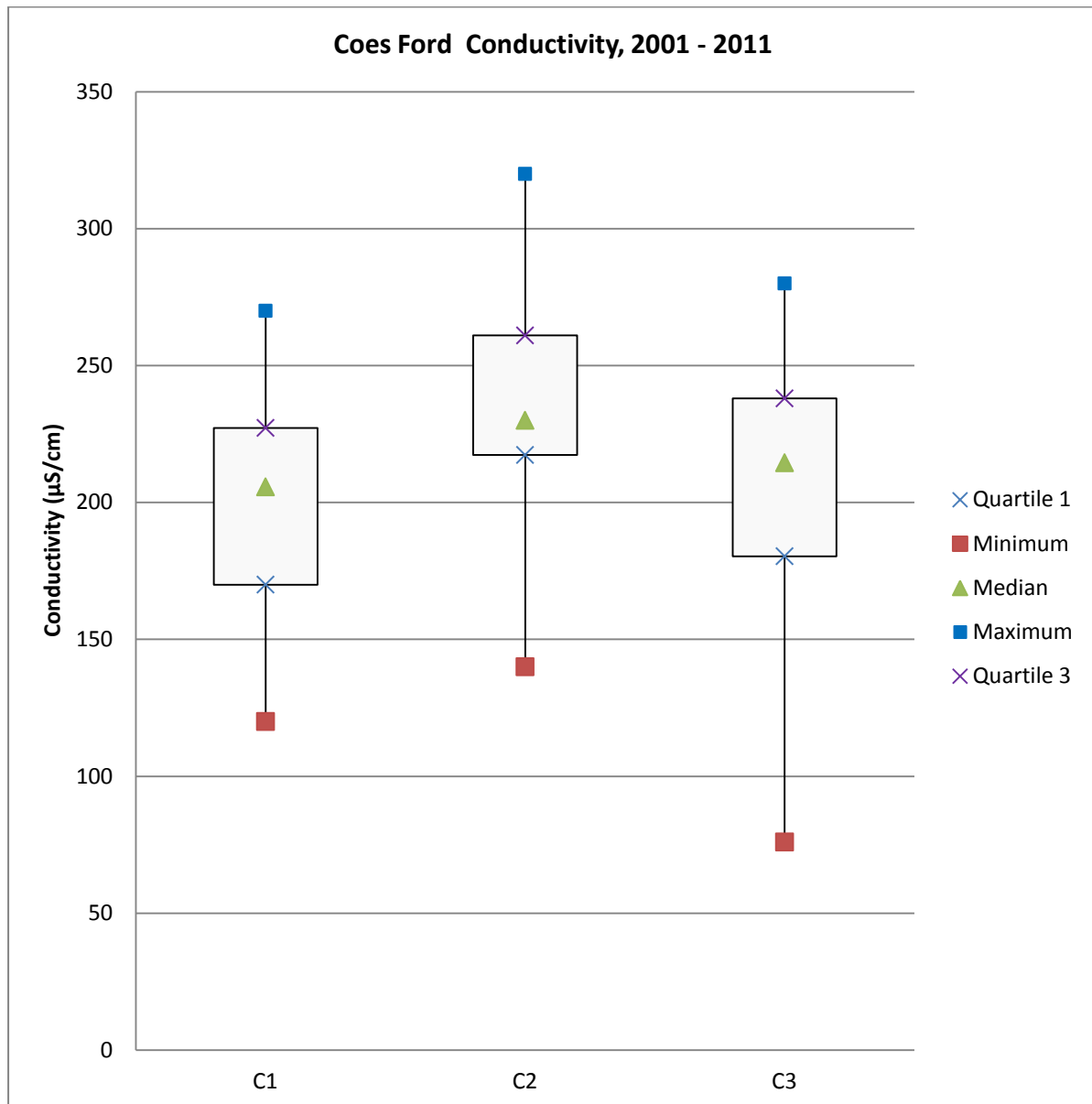


Figure 5: Conductivity levels at Coes Ford

References

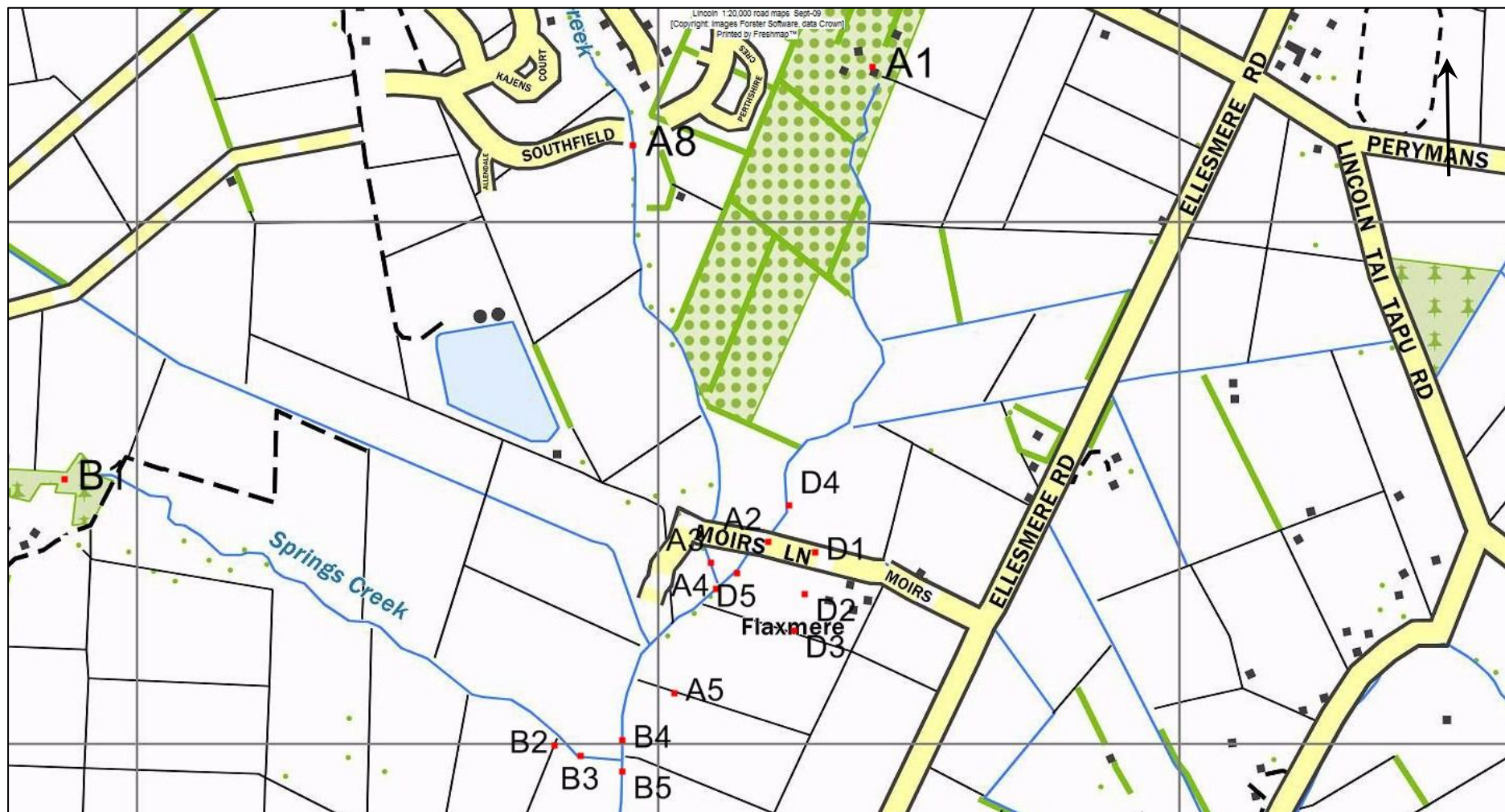
Collins, K. E., 2011. Benefits of riparian planting: a case study of lowland streams in the Lake Ellesmere catchment: a thesis submitted in partial fulfilment of the requirements of the degree of Master of Resource Studies at Lincoln University. Accessed from <http://researcharchive.lincoln.ac.nz/dspace/handle/10182/3835> on 30 January 2012.

MapToaster, 2009. New Zealand Transverse Mercator. Accessed from <http://www.maptoaster.com/maptoaster-topo-nz/articles/nztm/nztm.html> on 20 November 2011.

All maps produced using Freshmap™ V11.0 (freshmap.co.nz).

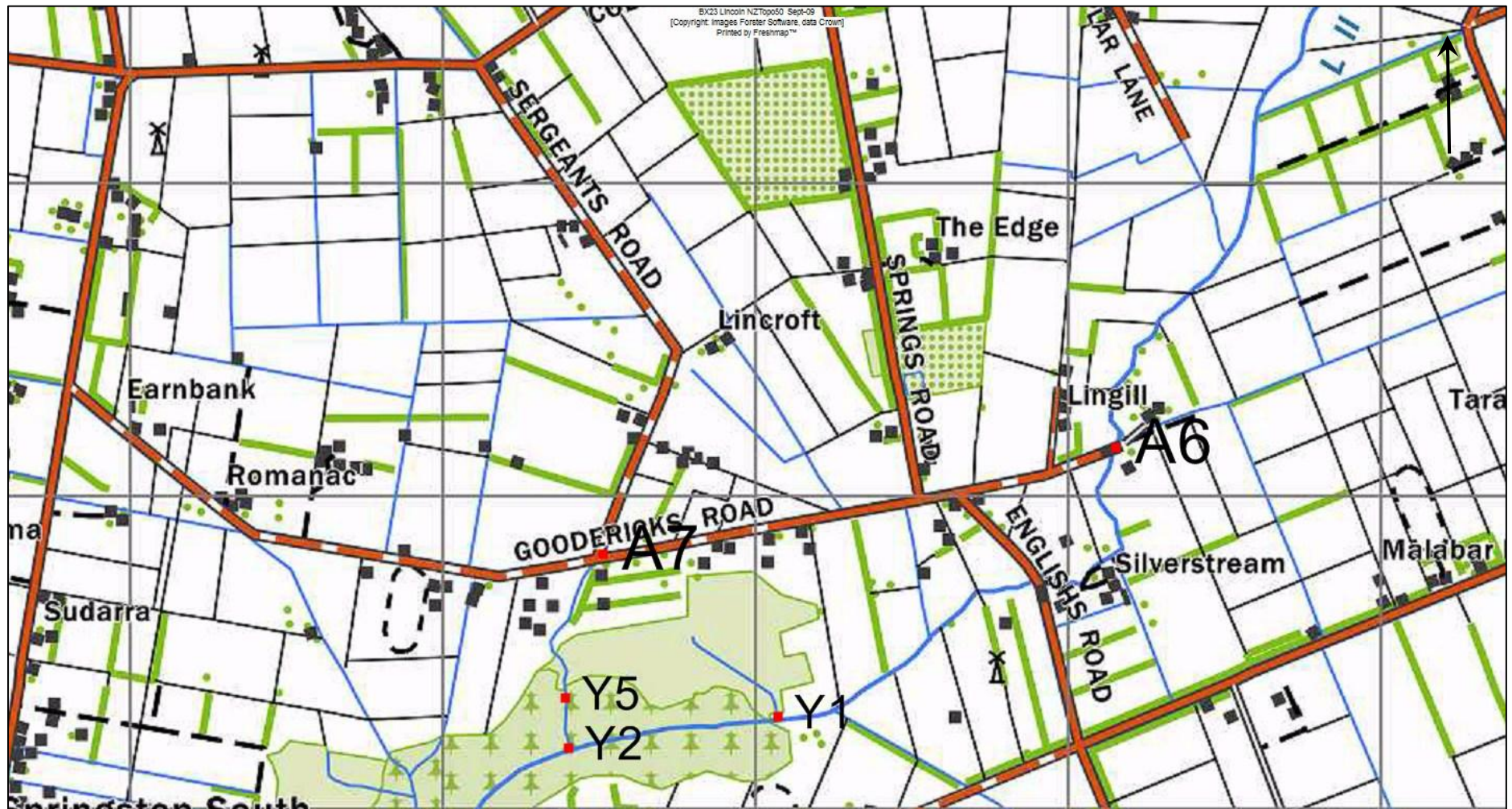
Appendix 1 Maps

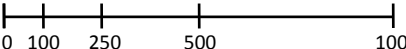
Map 1



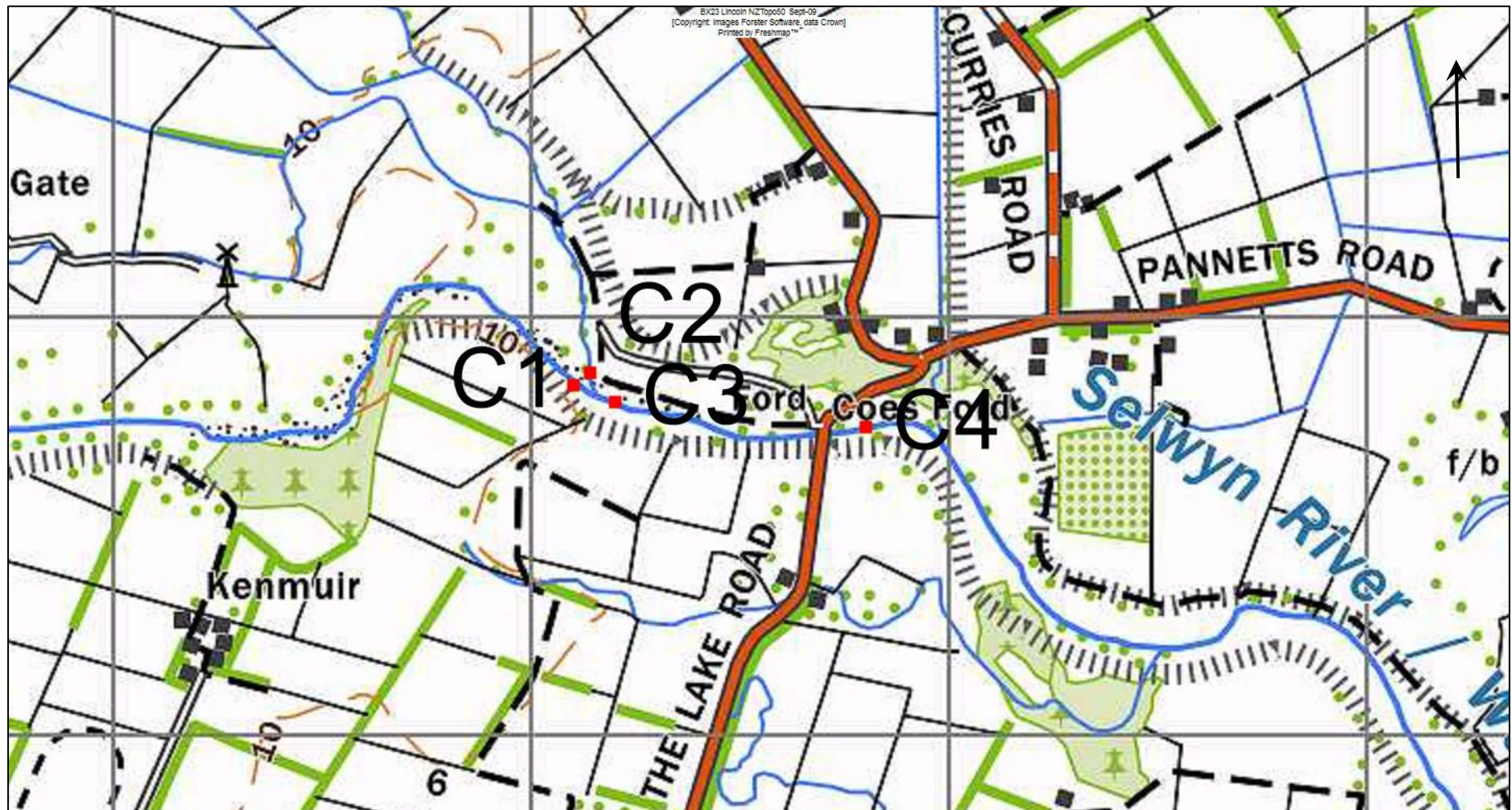
Scale: 1000 metres = 0 100 250 500 1000

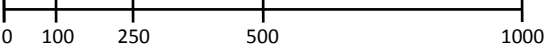
Map 2



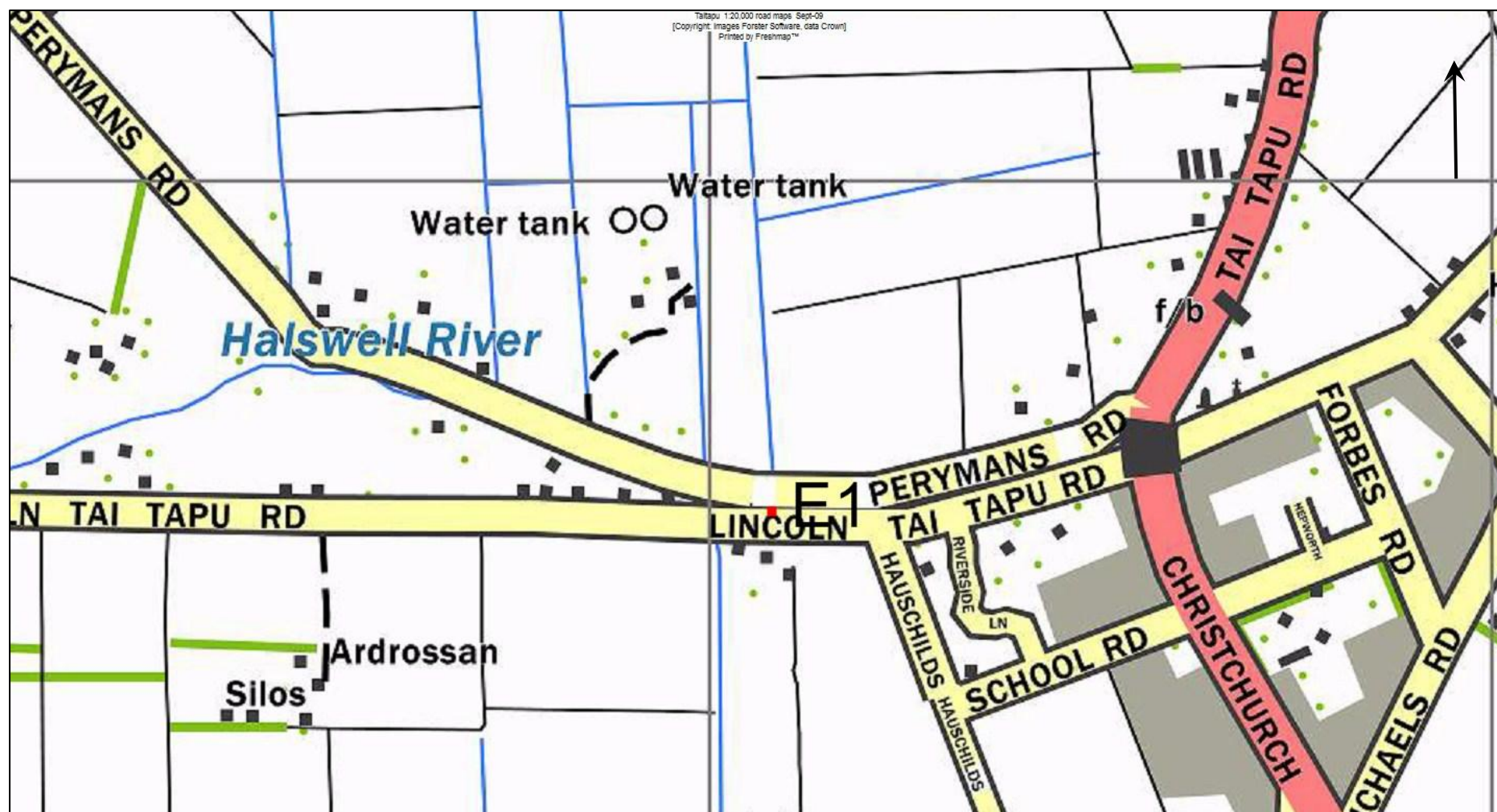
Scale: 1000 metres = 

Map 3



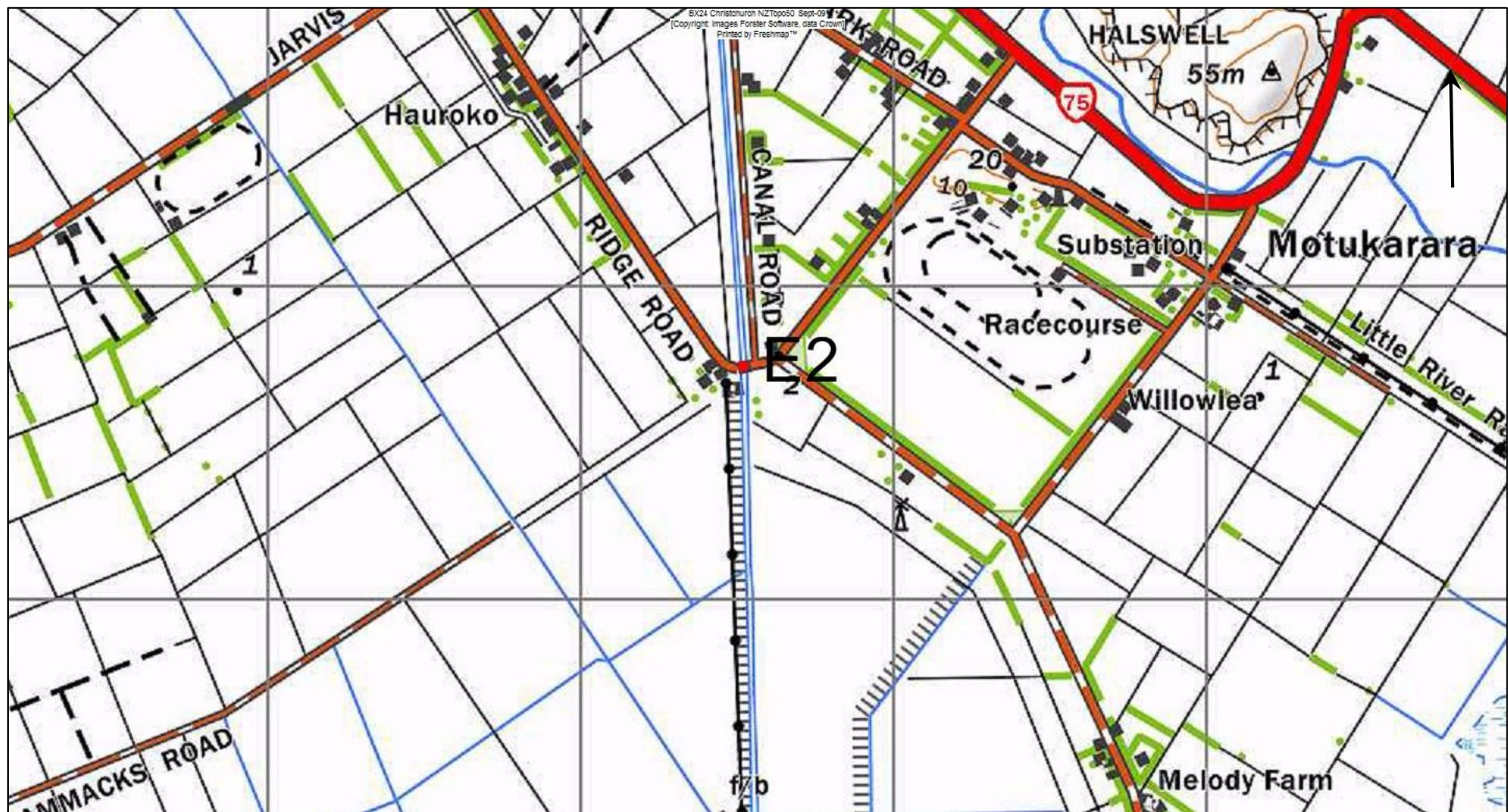
Scale: 1000 metres = 

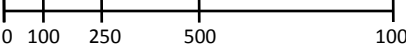
Map 4



Scale: 1000 metres = 0 100 250 500 1000

Map 5



Scale: 1000 metres = 

Map 6



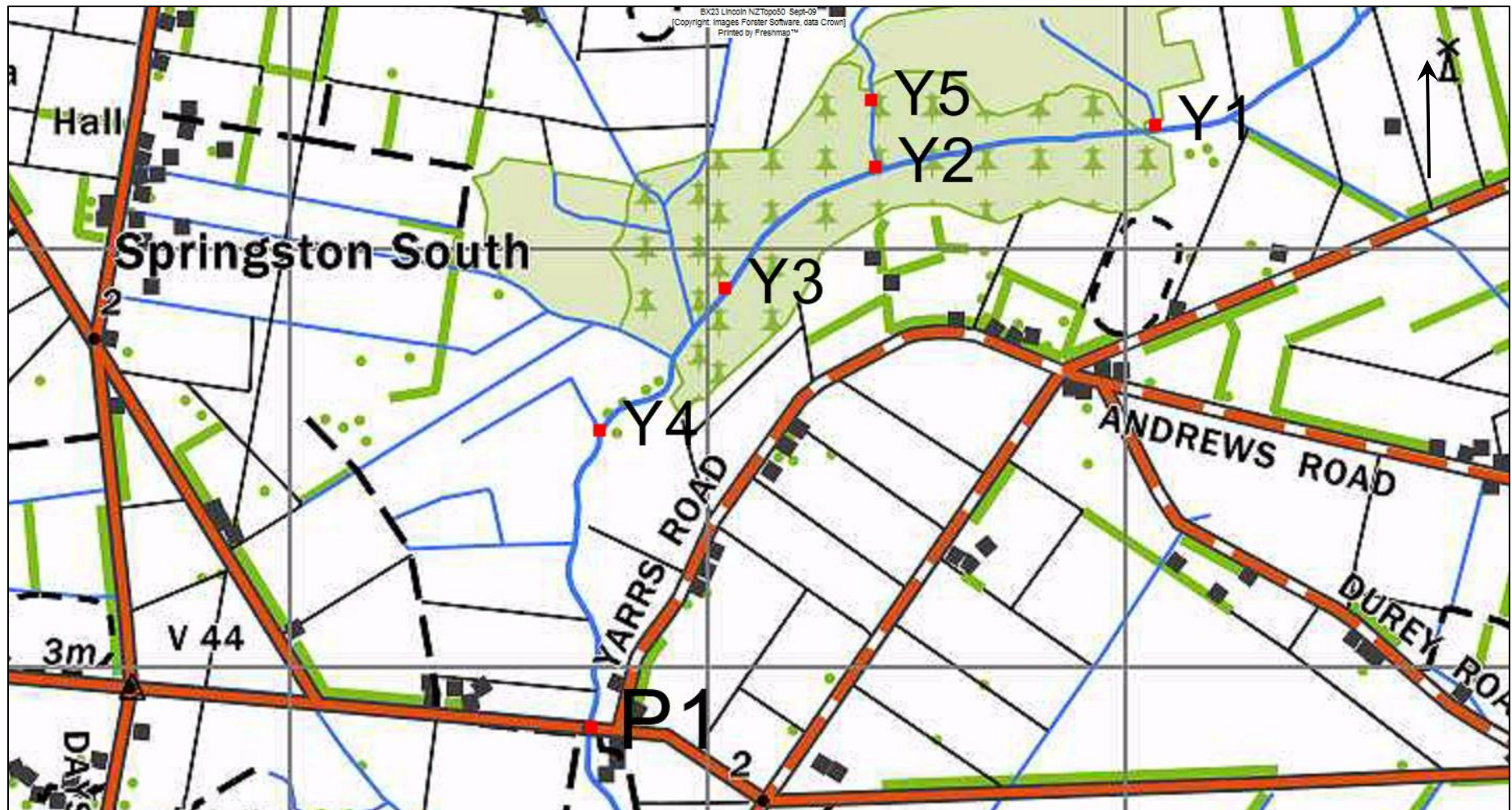
Scale: 1000 metres = 0 100 250 500 1000

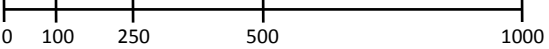
Map 7



Scale: 1000 metres = 0 100 250 500 1000

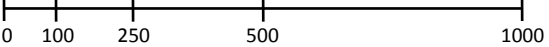
Map 8



Scale: 1000 metres = 

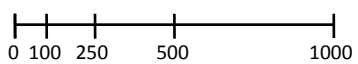
Map 9



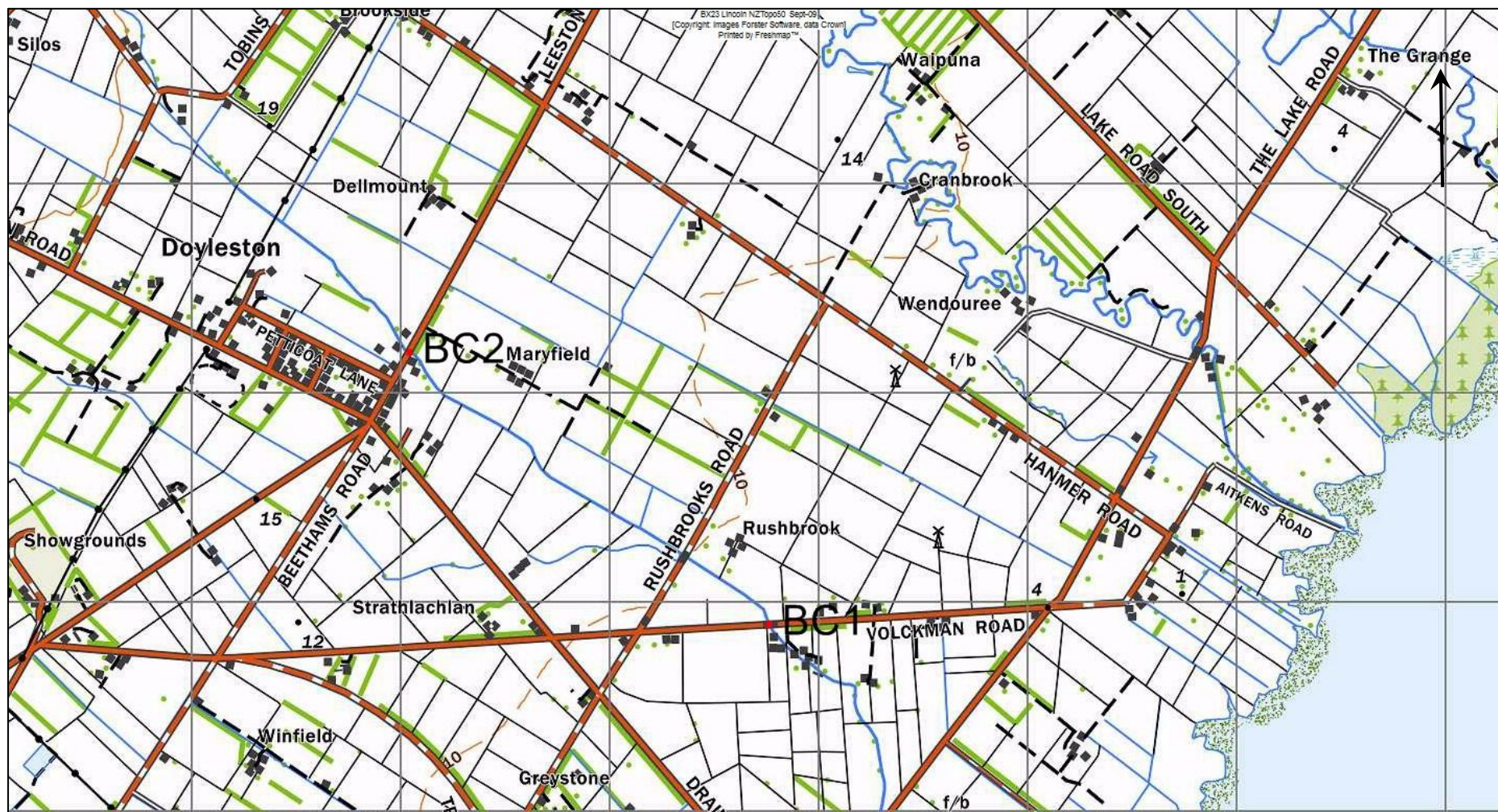
Scale: 1000 metres = 

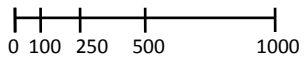
Map 10




Scale: 1000 metres = 

Map 11

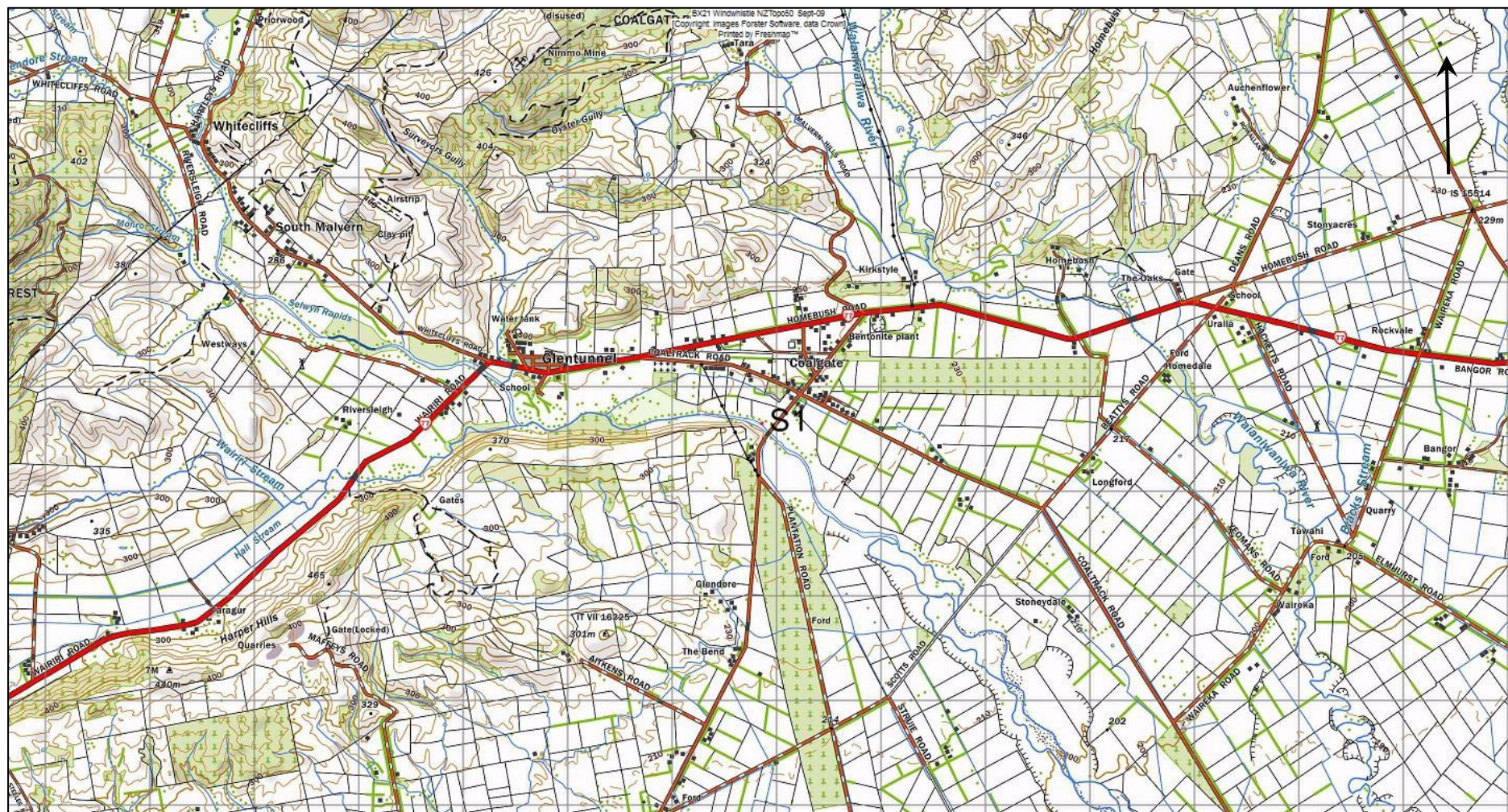


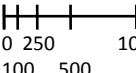
Scale: 1000 metres = 

This topographic map of the Kaituna Valley area in New Zealand features contour lines indicating elevation. Key geographical features include the Kaituna River, Kaituna Valley, and Kaituna Valley Road. A red line highlights a proposed route through the valley. The map also shows various peaks and points of interest, such as Kaituna, Glenrowan, and Rockwood. A north arrow is located in the top right corner.

Scale: 1000 metres = 

Map 13



Scale: 1000 metres = 

Appendix 2 Database

Refer to Microsoft Excel “LU 1993-2011 Ellesmere catchment database” file for all data. The site details and water quality parameters most commonly measured are reproduced here. Values listed in red are values that are suspected errors (e.g., unlikely magnitude, due to incorrect units or calculations). U/s denotes “U/s” and D/s denotes “D/s”.

Appendix 2, Table 1. Site location and weather data.

Source	Date	Time	Location					Weather conditions		
			Name	Ref	Lake Tributary	Easting	Northing	Condition	Wind direction/velocity	Rain in previous 48 hours
Collins: 2011	10/08/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	27/07/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	13/07/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	22/06/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	08/06/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	25/05/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	11/05/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	27/04/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	13/04/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	30/03/10	-	Birdlings Brook 1	BB1	Harts	1543540	5152620	-	-	-
Collins: 2011	10/08/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	27/07/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	13/07/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	22/06/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	08/06/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	25/05/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	11/05/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	27/04/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	13/04/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	30/03/10	-	Birdlings Brook 2	BB2	Harts	1542370	5153620	-	-	-
Collins: 2011	10/08/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	27/07/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	13/07/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	22/06/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	08/06/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	25/05/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	11/05/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	27/04/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	13/04/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	30/03/10	-	Boggy Creek 1	BC1	Boggy	1547760	5154900	-	-	-
Collins: 2011	10/08/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	27/07/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	13/07/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	22/06/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	08/06/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	25/05/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	11/05/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	27/04/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	13/04/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Collins: 2011	30/03/10	-	Boggy Creek 2	BC2	Boggy	1546040	5156200	-	-	-
Waterwatch	08/05/00	-	Chamberlains Ford	F1	Selwyn R	1549450	5162600	-	-	-
ERST 311	16/09/99	1400	Chamberlains Ford	F1	Selwyn R	1549450	5162600	-	-	-
ERST 311	03/09/99	1400	Chamberlains Ford	F1	Selwyn R	1549450	5162600	-	-	-

ERST 311	05/08/99	1400	Chamberlains Ford	F1	Selwyn R	1549450	5162600	-	-	[Rain likely]
ERST 601	16/08/98	1000	Chamberlains Ford	F1	Selwyn R	1549450	5162600	Rain	-	Yes
ERST 336	05/08/98	1000	Chamberlains Ford	F1	Selwyn R	1549450	5162600	Fine	No wind	-
ERST 601	29/07/98	1300	Chamberlains Ford	F1	Selwyn R	1549450	5162600	Fine	-	-
ERST 605	25/08/97	1000	Chamberlains Ford	F1	Selwyn R	1549450	5162600	Overcast	NE / mod	-
Waterwatch	08/03/10	-	Coes Ford	C4	Selwyn R	1552800	5161740	-	-	-
Waterwatch	29/02/08	-	Coes Ford	C4	Selwyn R	1552800	5161740	-	-	-
Waterwatch	26/02/07	-	Coes Ford	C4	Selwyn R	1552800	5161740	-	-	-
ERST 203	04/05/11	1630	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Showers	Light	-
ERST 203	13/04/11	1630	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	Light	-
ERST 203	06/04/11	1630	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	Light	-
ERST 203	21/04/10	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	Light	-
ERST 203	24/03/10	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Overcast	-	-
ERST 203	17/03/10	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine after	-	-
ERST 203	10/03/10	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	NE / mod	-
Waterwatch	26/11/09	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	13/10/09	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	09/04/08	1500	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	02/04/08	1500	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	19/03/08	1500	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	12/03/08	1500	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	02/05/07	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	04/04/07	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	21/03/07	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	07/03/07	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	16/02/07	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	23/11/06	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	19/09/06	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	01/11/05	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	01/11/05	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	01/11/05	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	20/04/05	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	cloudy	NW / light	-
ERST 203	13/04/05	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	SW / mod	-
ERST 203	23/03/05	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	cloudy	NE / light	-
ERST 203	16/03/05	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Overcast	NE / mod	-
ERST 203	31/03/04	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	-	-
ERST 203	29/03/04	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	-	-
ERST 203	17/03/04	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Overcast	-	-
ERST 203	10/03/04	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	-	-
ERST 203	08/03/04	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	-	-
ERST 203	04/03/04	1600	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	-	-
ERST 311	27/08/03	1300	Coes Ford D/s	C3	Selwyn R	1552136	5161837	Overcast	-	-
ERST 311	22/07/03	1100	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Overcast	-	-
ERST 311	14/08/02	1200	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Overcast	-	Yes (5.4)
ERST 311	17/07/02	1300	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	-	Yes (3.2)
Waterwatch	01/05/02	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ENNR 303	26/09/01	1300	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	Light	-
ERST 311	13/08/01	1000	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Fine	-	Yes (5.8)
ERST 311	25/07/01	1300	Coes Ford D/s	C3	Selwyn R	1552200	5161800	Overcast	No wind	0
Waterwatch	05/03/01	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	19/02/01	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
Waterwatch	08/05/00	-	Coes Ford D/s	C3	Selwyn R	1552200	5161800	-	-	-
ERST 203	04/05/11	1630	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Showers	Light	-
ERST 203	13/04/11	1630	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	Light	-
ERST 203	06/04/11	1630	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	Light	-
ERST 203	21/04/10	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	Light	-
ERST 203	24/03/10	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Overcast	-	-
ERST 203	17/03/10	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	-	Yes in am
ERST 203	10/03/10	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	NE / mod	-
ERST 203	09/04/08	1500	Coes Ford U/s	C1	Selwyn R	1552100	5161840	-	-	-
ERST 203	02/04/08	1500	Coes Ford U/s	C1	Selwyn R	1552100	5161840	-	-	-
ERST 203	19/03/08	1500	Coes Ford U/s	C1	Selwyn R	1552100	5161840	-	-	-

ERST 203	12/03/08	1500	Coes Ford U/s	C1	Selwyn R	1552100	5161840	-	-	-
ERST 203	02/05/07	-	Coes Ford U/s	C1	Selwyn R	1552100	5161840	-	-	-
ERST 203	04/04/07	-	Coes Ford U/s	C1	Selwyn R	1552100	5161840	-	-	-
ERST 203	21/03/07	-	Coes Ford U/s	C1	Selwyn R	1552100	5161840	-	-	-
ERST 203	07/03/07	-	Coes Ford U/s	C1	Selwyn R	1552100	5161840	-	-	-
ERST 203	12/04/06	1500	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	NE / light	-
ERST 203	05/04/06	1500	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Cloudy	NE / light	-
ERST 203	15/03/06	1500	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Cloudy	SW / light	-
ERST 203	08/03/06	1500	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Showers	-	-
ERST 203	20/04/05	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Cloudy	NW / light	-
ERST 203	13/04/05	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	SW / mod	-
ERST 203	23/03/05	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Cloudy	NE / light	-
ERST 203	16/03/05	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Overcast	NE / mod	-
ERST 203	31/03/04	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	-	-
ERST 203	29/03/04	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	-	-
ERST 203	17/03/04	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Overcast	-	-
ERST 203	10/03/04	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	-	-
ERST 203	08/03/04	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	-	-
ERST 203	04/03/04	1600	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	-	-
ERST 311	27/08/03	1300	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Overcast	-	-
ERST 311	22/07/03	1100	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Overcast	-	-
ERST 311	14/08/02	1200	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Overcast	-	Yes (5.4)
ERST 311	17/07/02	1300	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	-	Yes (3.2)
ERST 311	13/08/01	1000	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Fine	-	Yes (5.8)
ERST 311	25/07/01	1300	Coes Ford U/s	C1	Selwyn R	1552100	5161840	Overcast	No wind	0
ERST 611	09/04/03	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 203	02/04/03	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	NE / light	-
ERST 203	26/02/03	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 611	26/02/03	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 611	19/02/03	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 203	27/03/02	1200	D/s Moirs Lane	D5	LII R	1559150	5166330	Fine	-	-
ERST 203	20/03/02	1700	D/s Moirs Lane	D5	LII R	1559150	5166330	Fine	E	-
ERST 203	06/03/02	1600	D/s Moirs Lane	D5	LII R	1559150	5166330	Fine	S / Light	-
ERST 203	20/02/02	1630	D/s Moirs Lane	D5	LII R	1559150	5166330	Overcast	Strong	-
ERST 611	05/04/01	900	D/s Moirs Lane	D5	LII R	1559150	5166330	Cloudy	NW /	-
ERST 611	06/03/01	1000	D/s Moirs Lane	D5	LII R	1559150	5166330	Cloudy	None	-
ENNR 350	28/08/00	1000	D/s Moirs Lane	D5	LII R	1559150	5166330	Overcast	-	-
ERST 203	22/04/99	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 203	16/03/99	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 203	13/05/98	-	D/s Moirs Lane	D5	LII R	1559150	5166330	Rain	Strong	Yes
ERST 203	05/05/98	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 203	28/04/98	1200	D/s Moirs Lane	D5	LII R	1559150	5166330	Showers	-	Yes
ERST 203	01/04/98	-	D/s Moirs Lane	D5	LII R	1559150	5166330	Fine	NW /	Yes
ERST 203	31/03/98	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 203	24/03/98	1200	D/s Moirs Lane	D5	LII R	1559150	5166330	Fine	N / light	-
ERST 203	06/05/97	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 203	29/04/97	-	D/s Moirs Lane	D5	LII R	1559150	5166330	Fine	No wind	-
ERST 203	10/04/97	-	D/s Moirs Lane	D5	LII R	1559150	5166330	Fine	No wind	-
ERST 203	18/03/97	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	-
ERST 203	05/09/96	1300	D/s Moirs Lane	D5	LII R	1559150	5166330	Overcast	No wind	0
ERST 203	15/08/96	1200	D/s Moirs Lane	D5	LII R	1559150	5166330	-	No wind	Yes (4.9)
ERST 203	13/09/95	900	D/s Moirs Lane	D5	LII R	1559150	5166330	Overcast	NE / light	0
ERST 203	23/08/95	1100	D/s Moirs Lane	D5	LII R	1559150	5166330	Fine	Light	0
PHSC203	26/04/94	-	D/s Moirs Lane	D5	LII R	1559150	5166330	-	-	Yes (1.0)
Collins: 2011	10/08/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	27/07/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	13/07/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	22/06/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	08/06/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	25/05/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	11/05/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	27/04/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-

Collins: 2011	13/04/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	30/03/10	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
ERST 203	08/04/09	1430	Harts Creek 1	H1	Harts	1547140	5150320	Rain	SW / strong	-
Waterwatch	27/03/09	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
ERST 203	25/03/09	1430	Harts Creek 1	H1	Harts	1547140	5150320	Fine	SW / light	-
Waterwatch	23/03/09	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
ERST 203	18/03/09	1430	Harts Creek 1	H1	Harts	1547140	5150320	Cloudy	NW / light	-
ERST 203	11/03/09	1430	Harts Creek 1	H1	Harts	1547140	5150320	Showers	SW / strong	-
Waterwatch	23/02/09	-	Harts Creek 1	H1	Harts	1547140	5150320	-	-	-
Collins: 2011	10/08/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	27/07/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	13/07/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	22/06/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	08/06/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	25/05/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	11/05/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	27/04/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	13/04/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	30/03/10	-	Harts Creek 2	H2	Harts	1547400	5150670	-	-	-
Collins: 2011	10/08/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	27/07/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	13/07/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	22/06/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	08/06/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	25/05/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	11/05/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	27/04/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	13/04/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	30/03/10	-	Harts Creek 3	H3	Harts	1543520	5150070	-	-	-
Collins: 2011	10/08/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	27/07/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	13/07/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	22/06/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	08/06/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	25/05/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	11/05/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	27/04/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	13/04/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Collins: 2011	30/03/10	-	Harts Creek 4	H4	Harts	1543830	5149920	-	-	-
Waterwatch	12/03/10	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	10/03/10	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	03/03/10	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	26/02/10	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	24/02/10	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	19/02/10	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	17/02/10	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	25/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	25/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	20/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	20/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	18/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	18/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	13/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	13/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	06/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	06/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	04/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	04/03/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	27/02/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	27/02/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	25/02/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-
Waterwatch	18/02/09	-	Kaituna R 1	KR1	Kaituna R	1578900	5159500	-	-	-

[illegible]

Envirotown	06/10/11	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	Overcast	No wind	Yes
Envirotown	11/05/11	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	Overcast	-	-
Envirotown	03/05/10	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	Overcast	No wind	0
Waterwatch	06/09/09	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	-	-	-
Envirotown	04/04/09	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	Fine	NE / light	-
Envirotown	13/11/08	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	Fine	NE / light	0
Waterwatch	13/11/08	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	-	-	-
Envirotown	22/04/08	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	Cloudy	S / mod	Yes
Waterwatch	22/04/08	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	-	-	-
Waterwatch	09/10/07	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	-	-	-
Envirotown	07/08/07	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	Overcast	-	-
Waterwatch	07/08/07	-	Liffey Stream Lincoln	L1	LII R	1558470	5168200	-	-	-
ERST 311	02/08/11	1000	Liffey Stream U/s	A8	LII R	1558950	1558950	Fine	-	0
ERST 311	20/07/11	1000	Liffey Stream U/s	A8	LII R	1558950	1558950	Fine	-	0
ERST 311	16/08/10	1100	LII D/s Liffey	A4	LII R	1559110	5166300	Overcast	NE / light	0
ERST 311	03/08/10	1100	LII D/s Moirs	A4	LII R	1559110	5166300	Overcast	NE / mod	0
ERST 311	21/07/10	1100	LII D/s Moirs	A4	LII R	1559110	5166300	Overcast	E / Light	Yes (1.0)
ERST 203	12/04/00	1000	LII D/s Moirs	A4	LII R	1559110	5166300	Fine	No wind	-
ERST 203	10/04/00	1300	LII D/s Moirs	A4	LII R	1559110	5166300	Cloudy	-	-
ERST 203	29/03/00	1300	LII D/s Moirs	A4	LII R	1559110	5166300	Overcast	S / Light	Yes
ERST 203	17/03/00	1100	LII D/s Moirs	A4	LII R	1559110	5166300	Overcast	-	-
ERST 203	15/03/00	1000	LII D/s Moirs	A4	LII R	1559110	5166300	Overcast	No wind	-
ERST 203	06/03/00	1300	LII D/s Moirs	A4	LII R	1559110	5166300	Fine	Light	0
ERST 203	06/05/97	-	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	-
ERST 203	29/04/97	-	LII D/s Moirs	A4	LII R	1559110	5166300	Fine	No wind	-
ERST 203	10/04/97	-	LII D/s Moirs	A4	LII R	1559110	5166300	Fine	No wind	-
ERST 203	18/03/97	-	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	-
ERST 203	05/09/96	1300	LII D/s Moirs	A4	LII R	1559110	5166300	Overcast	No wind	0
ERST 203	15/08/96	1200	LII D/s Moirs	A4	LII R	1559110	5166300	-	No wind	Yes (4.9)
ERST 203	13/09/95	900	LII D/s Moirs	A4	LII R	1559110	5166300	Overcast	NE / light	0
ERST 203	23/08/95	1100	LII D/s Moirs	A4	LII R	1559110	5166300	Fine	Light	0
PHSC203	26/04/94	-	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	Yes (1.0)
ERST 203	25/08/93	1100	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	-
ERST 203	17/08/93	1100	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	-
ERST 203	10/08/93	1100	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	-
ERST 203	03/08/93	1100	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	-
ERST 203	27/07/93	1100	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	-
ERST 203	20/07/93	1100	LII D/s Moirs	A4	LII R	1559110	5166300	-	-	-
ERST 311	06/08/07	1100	LII D/s Springs Creek	B5	LII R	1558930	5165950	Overcast	SW / mod	-
ERST 311	24/07/07	1100	LII D/s Springs Creek	B5	LII R	1558930	5165950	Fine	None	-
ERST 311	11/07/07	1100	LII D/s Springs Creek	B5	LII R	1558930	5165950	Overcast	SW / mod	-
ERST 311	07/08/06	1000	LII D/s Springs Creek	B5	LII R	1558930	5165950	Rain	S / mod	-
ERST 311	25/07/06	1000	LII D/s Springs Creek	B5	LII R	1558930	5165950	Fine	NE / light	-
ERST 311	31/08/05	1400	LII Spring	A1	LII R	1559410	5167300	Fine	-	-
ERST 311	29/08/05	1400	LII Spring	A1	LII R	1559410	5167300	Fine	-	-
ERST 311	08/08/05	1000	LII Spring	A1	LII R	1559410	5167300	Showers	-	-
ERST 311	13/07/05	1000	LII Spring	A1	LII R	1559410	5167300	Fine	-	-
ERST 311	15/09/04	1100	LII Spring	A1	LII R	1559410	5167300	Fine	Light	-
ERST 311	09/08/04	1400	LII Spring	A1	LII R	1559410	5167300	Fine	Light	-
ERST 311	27/07/04	1100	LII Spring	A1	LII R	1559410	5167300	Fine	Light	-
ERST 311	14/07/04	1400	LII Spring	A1	LII R	1559410	5167300	Fine	Light	-
ERST 311	21/08/03	1000	LII Spring	A1	LII R	1559410	5167300	Overcast	-	-
ERST 311	22/07/03	1100	LII Spring	A1	LII R	1559410	5167300	Overcast	-	-
ERST 203	27/03/02	1200	LII Spring	A1	LII R	1559410	5167300	Fine	-	-
ERST 203	20/03/02	1700	LII Spring	A1	LII R	1559410	5167300	Fine	E	-
ERST 203	06/03/02	1600	LII Spring	A1	LII R	1559410	5167300	Fine	S / Light	-
ERST 611	06/03/02	-	LII Spring	A1	LII R	1559410	5167300	-	-	-
ERST 611	27/02/02	-	LII Spring	A1	LII R	1559410	5167300	-	-	-
ERST 203	20/02/02	1630	LII Spring	A1	LII R	1559410	5167300	Overcast	Strong	-
ERST 203	12/04/00	1000	LII Spring	A1	LII R	1559410	5167300	Fine	No wind	-
ERST 203	10/04/00	1300	LII Spring	A1	LII R	1559410	5167300	Cloudy	-	-
ERST 203	29/03/00	1300	LII Spring	A1	LII R	1559410	5167300	Overcast	S / Light	Yes

ERST 203	17/03/00	1100	LII Spring	A1	LII R	1559410	5167300	Overcast	-	-
ERST 203	15/03/00	1000	LII Spring	A1	LII R	1559410	5167300	Overcast	No wind	-
ERST 203	06/03/00	1300	LII Spring	A1	LII R	1559410	5167300	Fine	Light	0
ERST 311	06/08/07	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	Overcast	SW / mod	-
ERST 311	24/07/07	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	Fine	None	-
ERST 311	11/07/07	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	Overcast	SW / mod	-
ERST 311	07/08/06	1000	LII U/s Springs Creek	B4	LII R	1558930	5166010	Rain	S / mod	-
ERST 311	25/07/06	1000	LII U/s Springs Creek	B4	LII R	1558930	5166010	Fine	NE / light	-
ERST 203	25/08/93	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	-	-	-
ERST 203	17/08/93	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	-	-	-
ERST 203	10/08/93	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	-	-	-
ERST 203	03/08/93	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	-	-	-
ERST 203	27/07/93	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	-	-	-
ERST 203	20/07/93	1100	LII U/s Springs Creek	B4	LII R	1558930	5166010	-	-	-
ERST 311	17/08/09	-	Lower Halswell R	E2	Halswell	1565520	5157750	Overcast	None	-
ERST 311	04/08/09	-	Lower Halswell R	E2	Halswell	1565520	5157750	Fine	Light	-
ERST 311	22/07/09	-	Lower Halswell R	E2	Halswell	1565520	5157750	Fine	NW / light	-
ERST 311	02/08/11	1000	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	-	0
ERST 311	20/07/11	1000	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	-	0
ERST 311	31/08/05	1400	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	-	-
ERST 311	29/08/05	1400	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	-	-
ERST 311	08/08/05	1000	McDonald Rd Bridge	A6	LII R	1558150	5164160	Showers	-	-
ERST 311	13/07/05	1000	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	-	-
ERST 311	15/09/04	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	Light	-
ERST 311	09/08/04	1400	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	Light	-
ERST 311	27/07/04	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	Light	-
ERST 311	14/07/04	1400	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	Light	-
Waterwatch	01/05/04	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 311	21/08/03	1000	McDonald Rd Bridge	A6	LII R	1558150	5164160	Overcast	-	-
ERST 311	22/07/03	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	Overcast	-	-
ERST 611	09/04/03	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	15/10/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	12/10/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	29/09/94	930	McDonald Rd Bridge	A6	LII R	1558150	5164160	Overcast	SE / strong	Yes (0.5)
ERST 203	28/09/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	22/09/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	21/09/94	900	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	-	-
ERST 203	14/09/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	13/09/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	08/09/94	930	McDonald Rd Bridge	A6	LII R	1558150	5164160	Overcast	SW	-
ERST 203	31/08/94	1300	McDonald Rd Bridge	A6	LII R	1558150	5164160	Overcast	-	-
ERST 203	30/08/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	18/08/94	930	McDonald Rd Bridge	A6	LII R	1558150	5164160	Fine	SW	Yes (0.3)
ERST 203	18/08/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	17/08/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	10/08/94	930	McDonald Rd Bridge	A6	LII R	1558150	5164160	Cloudy	-	-
PHSC203	26/04/94	-	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	Yes (1.0)
ERST 203	25/08/93	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	17/08/93	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	10/08/93	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	03/08/93	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	27/07/93	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 203	20/07/93	1100	McDonald Rd Bridge	A6	LII R	1558150	5164160	-	-	-
ERST 311	15/09/04	1100	Moirs Farm Ditch 1	D1	LII R	1559300	5166370	Fine	Light	-
ERST 311	09/08/04	1400	Moirs Farm Ditch 1	D1	LII R	1559300	5166370	Fine	Light	-
ERST 311	27/07/04	1100	Moirs Farm Ditch 1	D1	LII R	1559300	5166370	Fine	Light	-
ERST 311	14/07/04	1400	Moirs Farm Ditch 1	D1	LII R	1559300	5166370	Fine	Light	-
ERST 311	15/09/04	1100	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Fine	Light	-
ERST 311	09/08/04	1400	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Fine	Light	-
ERST 311	27/07/04	1100	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Fine	Light	-
ERST 311	14/07/04	1400	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Fine	Light	-
ERST 311	14/08/02	1100	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Overcast	-	Yes (5.4)

ERST 311	17/07/02	1200	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Overcast	-	Yes (3.2)
ERST 611	06/03/02	-	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	-	-	-
ERST 611	27/02/02	-	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	-	-	-
ERST 611	05/04/01	900	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	cloudy	NW /	-
ERST 611	06/03/01	1000	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	cloudy	None	-
ERST 203	12/04/00	1000	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Fine	No wind	-
ERST 203	10/04/00	1300	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	cloudy	-	-
ERST 203	29/03/00	1300	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Overcast	S / Light	Yes
ERST 203	17/03/00	1100	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Overcast	-	-
ERST 203	15/03/00	1000	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Overcast	No wind	-
ERST 203	06/03/00	1300	Moirs Farm Ditch 2	D2	LII R	1559280	5166290	Fine	Light	0
ERST 311	15/09/04	1100	Moirs Farm Ditch 3	D3	LII R	1559260	5166220	Fine	Light	-
ERST 311	09/08/04	1400	Moirs Farm Ditch 3	D3	LII R	1559260	5166220	Fine	Light	-
ERST 311	27/07/04	1100	Moirs Farm Ditch 3	D3	LII R	1559260	5166220	Fine	Light	-
ERST 311	14/07/04	1400	Moirs Farm Ditch 3	D3	LII R	1559260	5166220	Fine	Light	-
ERST 311	31/08/05	1400	Moirs Farm Ditch 4	A5	LII R	1559030	5166100	Fine	-	-
ERST 311	29/08/05	1400	Moirs Farm Ditch 4	A5	LII R	1559030	5166100	Fine	-	-
ERST 311	08/08/05	1000	Moirs Farm Ditch 4	A5	LII R	1559030	5166100	Showers	-	-
ERST 311	13/07/05	1000	Moirs Farm Ditch 4	A5	LII R	1559030	5166100	Fine	-	-
ERST 311	02/08/11	1000	Moirs Lane Bridge	A2	LII R	1559210	5166390	Fine	-	0
ERST 311	20/07/11	1000	Moirs Lane Bridge	A2	LII R	1559210	5166390	Fine	-	0
ERST 311	16/08/10	1100	Moirs Lane Bridge	A2	LII R	1559210	5166390	Overcast	NE / light	0
ERST 311	03/08/10	1100	Moirs Lane Bridge	A2	LII R	1559210	5166390	Overcast	NE / mod	0
ERST 311	21/07/10	1100	Moirs Lane Bridge	A2	LII R	1559210	5166390	Overcast	E / Light	Yes (1.0)
ERST 311	31/08/05	1400	Moirs Lane Bridge	A2	LII R	1559210	5166390	Fine	-	-
ERST 311	29/08/05	1400	Moirs Lane Bridge	A2	LII R	1559210	5166390	Fine	-	-
ERST 311	08/08/05	1000	Moirs Lane Bridge	A2	LII R	1559210	5166390	Showers	-	-
ERST 311	13/07/05	1000	Moirs Lane Bridge	A2	LII R	1559210	5166390	Fine	-	-
ERST 611	09/04/03	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ERST 611	26/02/03	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ERST 611	19/02/03	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ERST 311	14/08/02	1100	Moirs Lane Bridge	A2	LII R	1559210	5166390	Overcast	-	Yes (5.4)
ERST 311	17/07/02	1200	Moirs Lane Bridge	A2	LII R	1559210	5166390	Overcast	-	Yes (3.2)
ERST 611	06/03/02	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ERST 611	27/02/02	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ENNR 303	26/09/01	1300	Moirs Lane Bridge	A2	LII R	1559210	5166390	cloudy	E / strong	-
ERST 203	22/04/99	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ERST 203	16/03/99	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ERST 203	13/05/98	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	Rain	Strong	Yes
ERST 203	05/05/98	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ERST 203	28/04/98	1200	Moirs Lane Bridge	A2	LII R	1559210	5166390	Showers	-	Yes
ERST 203	01/04/98	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	Fine	NW /	Yes
ERST 203	31/03/98	-	Moirs Lane Bridge	A2	LII R	1559210	5166390	-	-	-
ERST 203	24/03/98	1200	Moirs Lane Bridge	A2	LII R	1559210	5166390	Fine	N / light	-
Waterwatch	15/05/07	-	Nottingham Stream	N1	Halswell	1565230	5173710	-	-	-
Waterwatch	15/05/07	-	Nottingham Stream	N1	Halswell	1565230	5173710	-	-	-
Waterwatch	15/05/07	-	Nottingham Stream	N1	Halswell	1565230	5173710	-	-	-
Waterwatch	15/05/07	-	Nottingham Stream	N1	Halswell	1565230	5173710	-	-	-
ERST 311	21/08/03	1000	Pannetts Bridge	P1	LII R	1555720	5161860	Overcast	-	-
ERST 311	22/07/03	1100	Pannetts Bridge	P1	LII R	1555720	5161860	Overcast	-	-
PHSC203	26/04/94	-	Pannetts Bridge	P1	LII R	1555720	5161860	-	-	Yes (1.0)
Waterwatch	08/03/10	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	23/03/09	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	29/02/08	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	10/05/07	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	10/05/07	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	10/05/07	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	09/05/07	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	09/05/07	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	09/05/07	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	09/05/07	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	10/04/07	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-

Waterwatch	23/04/02	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	23/04/02	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
Waterwatch	08/05/01	-	Selwyn R Coalgate	S1	Selwyn R	1515860	5184660	-	-	-
ERST 311	03/08/10	1100	Sergeants Rd drain	A7	LII R	1556490	5163810	Overcast	NE / mod	0
ERST 311	21/07/10	1100	Sergeants Rd drain	A7	LII R	1556490	5163810	Overcast	E / Light	Yes (1.0)
ERST 311	16/08/10	1100	Sergeants Rd Drain	A7	LII R	1556510	5163820	Overcast	NE / light	0
ERST 203	04/05/11	1630	Silverstream	C2	Selwyn R	1552140	5161870	Showers	Light	-
ERST 203	13/04/11	1630	Silverstream	C2	Selwyn R	1552140	5161870	Fine	Light	-
ERST 203	06/04/11	1630	Silverstream	C2	Selwyn R	1552140	5161870	Fine	Light	-
ERST 203	21/04/10	1600	Silverstream	C2	Selwyn R	1552140	5161870	Fine	Light	-
ERST 203	24/03/10	1600	Silverstream	C2	Selwyn R	1552140	5161870	Overcast	-	Morning
ERST 203	17/03/10	1600	Silverstream	C2	Selwyn R	1552140	5161870	rain	-	-
ERST 203	10/03/10	1600	Silverstream	C2	Selwyn R	1552140	5161870	Fine	NE / mod	-
ERST 203	09/04/08	1500	Silverstream	C2	Selwyn R	1552140	5161870	-	-	-
ERST 203	02/04/08	1500	Silverstream	C2	Selwyn R	1552140	5161870	-	-	-
ERST 203	19/03/08	1500	Silverstream	C2	Selwyn R	1552140	5161870	-	-	-
ERST 203	12/03/08	1500	Silverstream	C2	Selwyn R	1552140	5161870	-	-	-
ERST 203	02/05/07	-	Silverstream	C2	Selwyn R	1552140	5161870	-	-	-
ERST 203	04/04/07	-	Silverstream	C2	Selwyn R	1552140	5161870	-	-	-
ERST 203	21/03/07	-	Silverstream	C2	Selwyn R	1552140	5161870	-	-	-
ERST 203	07/03/07	-	Silverstream	C2	Selwyn R	1552140	5161870	-	-	-
ERST 203	12/04/06	1500	Silverstream	C2	Selwyn R	1552140	5161870	Fine	NE / light	-
ERST 203	05/04/06	1500	Silverstream	C2	Selwyn R	1552140	5161870	cloudy	NE / light	-
ERST 203	15/03/06	1500	Silverstream	C2	Selwyn R	1552140	5161870	Overcast	SW / light	-
ERST 203	08/03/06	1500	Silverstream	C2	Selwyn R	1552140	5161870	Showers	-	-
ERST 203	20/04/05	1600	Silverstream	C2	Selwyn R	1552140	5161870	cloudy	NW / light	-
ERST 203	13/04/05	1600	Silverstream	C2	Selwyn R	1552140	5161870	Fine	SW / mod	-
ERST 203	23/03/05	1600	Silverstream	C2	Selwyn R	1552140	5161870	cloudy	NE / light	-
ERST 203	16/03/05	1600	Silverstream	C2	Selwyn R	1552140	5161870	Overcast	NE / mod	-
ERST 203	31/03/04	1600	Silverstream	C2	Selwyn R	1552140	5161870	Fine	-	-
ERST 203	29/03/04	1600	Silverstream	C2	Selwyn R	1552140	5161870	Fine	-	-
ERST 203	17/03/04	1600	Silverstream	C2	Selwyn R	1552140	5161870	Overcast	-	-
ERST 203	10/03/04	1600	Silverstream	C2	Selwyn R	1552140	5161870	Fine	-	-
ERST 203	08/03/04	1600	Silverstream	C2	Selwyn R	1552140	5161870	Fine	-	-
ERST 203	04/03/04	1600	Silverstream	C2	Selwyn R	1552140	5161870	Fine	-	-
ERST 311	27/08/03	1300	Silverstream	C2	Selwyn R	1552140	5161870	Overcast	-	-
ERST 311	22/07/03	1100	Silverstream	C2	Selwyn R	1552140	5161870	Overcast	-	-
ERST 311	14/08/02	1200	Silverstream	C2	Selwyn R	1552140	5161870	Overcast	-	Yes (5.4)
ERST 311	17/07/02	1300	Silverstream	C2	Selwyn R	1552140	5161870	Fine	-	Yes (3.2)
ERST 311	13/08/01	1000	Silverstream	C2	Selwyn R	1552140	5161870	Fine	-	Yes (5.8)
ERST 311	25/07/01	1300	Silverstream	C2	Selwyn R	1552140	5161870	Overcast	No wind	0
ERST 311	06/08/07	1100	Springs Creek	B3	LII R	1558850	5165980	Overcast	SW / mod	-
ERST 311	24/07/07	1100	Springs Creek	B3	LII R	1558850	5165980	Fine	None	-
ERST 311	11/07/07	1100	Springs Creek	B3	LII R	1558850	5165980	Overcast	SW / mod	-
ERST 311	07/08/06	1000	Springs Creek	B3	LII R	1558850	5165980	Rain	S / mod	-
ERST 311	25/07/06	1000	Springs Creek	B3	LII R	1558850	5165980	Fine	NE / light	-
ERST 311	06/08/07	1100	Springs Creek Spring	B1	LII R	1557860	5166510	Overcast	SW / mod	-
ERST 311	24/07/07	1100	Springs Creek Spring	B1	LII R	1557860	5166510	Fine	None	-
ERST 311	11/07/07	1100	Springs Creek Spring	B1	LII R	1557860	5166510	Overcast	SW / mod	-
ERST 311	07/08/06	1000	Springs Creek Spring	B1	LII R	1557860	5166510	Rain	S / mod	-
ERST 311	25/07/06	1000	Springs Creek Spring	B1	LII R	1557860	5166510	Fine	NE / light	-
ERST 311	17/08/09	-	Upper Halswell R	E1	Halswell	1563080	5165580	Overcast	None	-
ERST 311	04/08/09	-	Upper Halswell R	E1	Halswell	1563080	5165580	Fine	Light	-
ERST 311	22/07/09	-	Upper Halswell R	E1	Halswell	1563080	5165580	Fine	NW / light	-
ERST 203	02/04/03	-	U/s Moirs Lane	D4	LII R	1559250	5166460	-	NE / light	-
ERST 203	26/02/03	-	U/s Moirs Lane	D4	LII R	1559250	5166460	-	-	-
ERST 611	05/04/01	900	U/s Moirs Lane	D4	LII R	1559250	5166460	cloudy	NW /	-
ERST 611	06/03/01	1000	U/s Moirs Lane	D4	LII R	1559250	5166460	cloudy	None	-
ENNR 350	28/08/00	1000	U/s Moirs Lane	D4	LII R	1559250	5166460	Overcast	-	-
ERST 611	07/04/04	1200	Waikewai 1	W1	Waikeke	1546570	5145730	-	-	Yes
ERST 611	01/04/04	1200	Waikewai 1	W1	Waikeke	1546570	5145730	-	-	-
ERST 611	26/03/04	1200	Waikewai 1	W1	Waikeke	1546570	5145730	-	-	-

ERST 611	19/03/04	1200	Waikewai 1	W1	Waikeke	1546570	5145730	-	-	-
ERST 611	07/04/04	1200	Waikewai 2	W2	Waikeke	1547760	5144270	-	-	Yes
ERST 611	01/04/04	1200	Waikewai 2	W2	Waikeke	1547760	5144270	-	-	-
ERST 611	26/03/04	1200	Waikewai 2	W2	Waikeke	1547760	5144270	-	-	-
ERST 611	19/03/04	1200	Waikewai 2	W2	Waikeke	1547760	5144270	-	-	-
ERST 611	07/04/04	1200	Waikewai 3	W3	Waikeke	1548270	5144180	-	-	Yes
ERST 611	01/04/04	1200	Waikewai 3	W3	Waikeke	1548270	5144180	-	-	-
ERST 611	26/03/04	1200	Waikewai 3	W3	Waikeke	1548270	5144180	-	-	-
ERST 611	19/03/04	1200	Waikewai 3	W3	Waikeke	1548270	5144180	-	-	-
ERST 611	07/04/04	1200	Waikewai 4	W4	Waikeke	1548400	5144250	-	-	Yes
ERST 611	01/04/04	1200	Waikewai 4	W4	Waikeke	1548400	5144250	-	-	-
ERST 611	26/03/04	1200	Waikewai 4	W4	Waikeke	1548400	5144250	-	-	-
ERST 611	19/03/04	1200	Waikewai 4	W4	Waikeke	1548400	5144250	-	-	-
ERST 611	07/04/04	1200	Waikewai 5	W5	Waikeke	1548320	5144100	-	-	Yes
ERST 611	01/04/04	1200	Waikewai 5	W5	Waikeke	1548320	5144100	-	-	-
ERST 611	26/03/04	1200	Waikewai 5	W5	Waikeke	1548320	5144100	-	-	-
ERST 611	19/03/04	1200	Waikewai 5	W5	Waikeke	1548320	5144100	-	-	-
ERST 311	06/08/07	1100	X-Drain	B2	LII R	1558800	5166000	Overcast	SW / mod	-
ERST 311	24/07/07	1100	X-Drain	B2	LII R	1558800	5166000	Fine	None	-
ERST 311	11/07/07	1100	X-Drain	B2	LII R	1558800	5166000	Overcast	SW / mod	-
ERST 611	04/05/09	-	Yarrs Lagoon 1	Y1	LII R	1557070	5163300	-	-	-
ERST 611	06/04/09	-	Yarrs Lagoon 1	Y1	LII R	1557070	5163300	-	-	-
ERST 611	26/03/09	-	Yarrs Lagoon 1	Y1	LII R	1557070	5163300	-	-	-
ERST 611	04/05/09	-	Yarrs Lagoon 2	Y2	LII R	1556400	5163200	-	-	-
ERST 611	06/04/09	-	Yarrs Lagoon 2	Y2	LII R	1556400	5163200	-	-	-
ERST 611	26/03/09	-	Yarrs Lagoon 2	Y2	LII R	1556400	5163200	-	-	-
ERST 611	04/05/09	-	Yarrs Lagoon 3	Y3	LII R	1556040	5162910	-	-	-
ERST 611	06/04/09	-	Yarrs Lagoon 3	Y3	LII R	1556040	5162910	-	-	-
ERST 611	26/03/09	-	Yarrs Lagoon 3	Y3	LII R	1556040	5162910	-	-	-
ERST 611	04/05/09	-	Yarrs Lagoon 4	Y4	LII R	1555740	5162570	-	-	-
ERST 611	06/04/09	-	Yarrs Lagoon 4	Y4	LII R	1555740	5162570	-	-	-
ERST 611	26/03/09	-	Yarrs Lagoon 4	Y4	LII R	1555740	5162570	-	-	-
ERST 611	04/05/09	-	Yarrs Lagoon 5	Y5	LII R	1556390	5163360	-	-	-
ERST 611	06/04/09	-	Yarrs Lagoon 5	Y5	LII R	1556390	5163360	-	-	-
ERST 611	26/03/09	-	Yarrs Lagoon 5	Y5	LII R	1556390	5163360	-	-	-

Appendix 2, Table2. Water quality parameters; Flow, temp, pH, conductivity, DO and PO₄.

Date	Name	Stream flow (L/sec)	Water temp (°C)	pH	Cond (µS/cm)	DO (mg/L)	DO sat (%)	Soluble PO ₄ (mg/L)	Total PO ₄ (mg/L)
10/08/10	Birdlings Brook 1	-	8.5	7.2	336.0	-	70.4	0.36	-
27/07/10	Birdlings Brook 1	-	9.9	7.0	385.0	-	86.3	0.14	-
13/07/10	Birdlings Brook 1	-	8.4	6.9	376.0	-	84.8	0.80	-
22/06/10	Birdlings Brook 1	-	10.3	7.0	400.0	-	79.8	0.36	-
08/06/10	Birdlings Brook 1	-	10.2	6.6	391.0	-	75.4	0.38	-
25/05/10	Birdlings Brook 1	-	11.9	6.6	311.0	-	75.7	0.28	-
11/05/10	Birdlings Brook 1	-	11.7	6.8	313.0	-	76.6	0.17	-
27/04/10	Birdlings Brook 1	-	13.3	7.2	321.0	-	71.2	0.33	-
13/04/10	Birdlings Brook 1	-	13.3	6.9	318.0	-	78.5	0.56	-
30/03/10	Birdlings Brook 1	-	13.2	7.0	320.0	-	93.6	0.13	-
10/08/10	Birdlings Brook 2	-	8.2	7.1	344.0	-	76.1	0.36	-
27/07/10	Birdlings Brook 2	-	10.2	7.1	387.0	-	75.9	0.34	-
13/07/10	Birdlings Brook 2	-	8.7	6.6	370.0	-	70.8	0.72	-
22/06/10	Birdlings Brook 2	-	10.4	6.6	414.0	-	66.3	0.23	-
08/06/10	Birdlings Brook 2	-	10.5	6.3	402.0	-	53.6	0.51	-
25/05/10	Birdlings Brook 2	-	12.3	6.5	296.0	-	69.0	0.76	-
11/05/10	Birdlings Brook 2	-	12.3	6.9	292.0	-	75.7	0.25	-
27/04/10	Birdlings Brook 2	-	13.1	7.0	299.0	-	65.1	0.66	-
13/04/10	Birdlings Brook 2	-	13.4	7.1	299.0	-	51.1	0.30	-
30/03/10	Birdlings Brook 2	-	15.7	7.2	295.0	-	74.4	0.10	-
10/08/10	Boggy Creek 1	-	5.7	7.4	246.0	-	85.2	1.02	-
27/07/10	Boggy Creek 1	-	8.1	7.3	377.0	-	97.6	0.15	-
13/07/10	Boggy Creek 1	-	5.1	6.9	376.0	-	96.9	0.21	-
22/06/10	Boggy Creek 1	-	9.0	6.7	409.0	-	90.1	0.54	-
08/06/10	Boggy Creek 1	-	8.7	6.8	387.0	-	84.8	1.18	-
25/05/10	Boggy Creek 1	-	10.8	6.7	317.0	-	92.3	0.79	-
11/05/10	Boggy Creek 1	-	9.9	7.0	303.0	-	95.0	0.49	-
27/04/10	Boggy Creek 1	-	13.3	7.1	308.0	-	91.3	0.31	-
13/04/10	Boggy Creek 1	-	13.0	7.2	290.0	-	91.4	0.40	-
30/03/10	Boggy Creek 1	-	11.7	7.3	293.0	-	92.4	0.26	-
10/08/10	Boggy Creek 2	-	6.0	7.4	262.0	-	85.7	0.82	-
27/07/10	Boggy Creek 2	-	8.1	7.2	369.0	-	100.0	0.17	-
13/07/10	Boggy Creek 2	-	5.7	6.8	367.0	-	97.8	0.20	-
22/06/10	Boggy Creek 2	-	9.4	6.9	399.0	-	92.5	0.40	-
08/06/10	Boggy Creek 2	-	8.8	6.8	401.0	-	87.2	1.16	-
25/05/10	Boggy Creek 2	-	10.8	6.4	311.0	-	87.2	0.32	-
11/05/10	Boggy Creek 2	-	9.9	7.0	305.0	-	86.8	0.20	-
27/04/10	Boggy Creek 2	-	13.2	7.2	307.0	-	80.3	0.26	-
13/04/10	Boggy Creek 2	-	13.0	7.4	290.0	-	85.4	0.31	-
30/03/10	Boggy Creek 2	-	10.6	7.3	295.0	-	87.9	0.29	-
08/05/00	Chamberlains Ford	-	10	7.7	80.0	7.80	85.0	0.50	-
16/09/99	Chamberlains Ford	2421	11.0	7.8	150.0	7.00	-	0.08	0.27
03/09/99	Chamberlains Ford	2733	11.5	7.8	180.0	8.90	-	0.10	-
05/08/99	Chamberlains Ford	12386	8.9	7.4	137.5	11.60	-	0.24	0.35
16/08/98	Chamberlains Ford	718	9.0	6.7	180.0	11.50	-	0.27	0.88
05/08/98	Chamberlains Ford	797	7.1	7.2	250.0	-	95.0	0.34	0.35
29/07/98	Chamberlains Ford	923	10.8	7.3	165.0	12.00	-	0.15	0.18
25/08/97	Chamberlains Ford	11100	9.4	9.2	112.4	5.20	-	0.26	0.41
08/03/10	Coes Ford	-	17.5	7.3	220.00	9.5	99.0	0.53	-
29/02/08	Coes Ford	-	17.5	7.1	210.00	7.1	75.0	0.29	-
26/02/07	Coes Ford	-	21.3	-	221.00	8.7	101.0	0.15	-
04/05/11	Coes Ford D/s	861	13.0	7.5	250.0	8.70	84.0	0.48	-
13/04/11	Coes Ford D/s	768	13.0	6.8	232.0	9.90	95.0	0.30	-
06/04/11	Coes Ford D/s	656	13.0	7.2	270.0	9.40	93.0	0.40	-
21/04/10	Coes Ford D/s	39	13.7	7.6	262.0	6.68	66.2	0.29	-
24/03/10	Coes Ford D/s	-	12.1	7.1	256.0	9.25	86.7	0.12	-

17/03/10	Coes Ford D/s	-	16.8	7.0	205.0	9.64	102.4	0.22	-
10/03/10	Coes Ford D/s	148	19.8	7.3	208.7	8.60	96.5	0.14	-
26/11/09	Coes Ford D/s	-	-	7.6	190.00	9.1	-	-	-
13/10/09	Coes Ford D/s	-	14	7.1	223.00	9.9	98.0	0.23	-
09/04/08	Coes Ford D/s	13	13.1	6.9	275.0	7.76	72.6	1.30	-
02/04/08	Coes Ford D/s	14	13.8	7.2	244.0	8.47	81.2	0.27	-
19/03/08	Coes Ford D/s	17	16.8	7.1	219.0	5.85	62.0	0.40	-
12/03/08	Coes Ford D/s	15	15.4	6.9	230.0	7.45	74.0	1.21	-
02/05/07	Coes Ford D/s	1051	13.5	7.1	278.0	9.02	88.4	0.23	-
04/04/07	Coes Ford D/s	682	17.0	-	239.0	9.13	97.8	0.26	-
21/03/07	Coes Ford D/s	810	18.9	7.0	250.0	9.39	102.5	0.52	-
07/03/07	Coes Ford D/s	685	18.8	7.2	220.0	8.80	96.1	0.39	-
16/02/07	Coes Ford D/s	-	-	6.9	220.00	9.8	-	-	-
23/11/06	Coes Ford D/s	-	-	7.8	260.00	9.8	-	0.33	-
19/09/06	Coes Ford D/s	-	9.6	7.2	280.00	11.9	106.0	0.17	-
01/11/05	Coes Ford D/s	-	-	7.4	160.00	-	-	0.09	-
01/11/05	Coes Ford D/s	-	-	7.2	180.00	-	-	0.18	-
01/11/05	Coes Ford D/s	-	-	7.4	160.00	-	-	0.19	-
20/04/05	Coes Ford D/s	455	15.0	7.6	220.0	7.00	72.0	0.45	-
13/04/05	Coes Ford D/s	539	14.0	7.6	210.0	8.50	76.0	0.40	-
23/03/05	Coes Ford D/s	444	16.0	7.9	230.0	7.10	74.0	0.90	-
16/03/05	Coes Ford D/s	480	18.5	7.7	190.0	7.70	85.0	0.14	-
31/03/04	Coes Ford D/s	250	12.0	7.4	190.0	9.00	86.0	0.57	-
29/03/04	Coes Ford D/s	160	13.0	7.6	230.0	9.10	89.0	0.44	-
17/03/04	Coes Ford D/s	-	15.0	7.6	190.0	6.70	69.0	0.40	-
10/03/04	Coes Ford D/s	250	18.1	7.4	190.0	7.40	81.0	0.18	-
08/03/04	Coes Ford D/s	200	16.0	7.4	190.0	8.90	94.0	0.11	-
04/03/04	Coes Ford D/s	290	17.8	8.2	170.0	10.50	-	0.22	-
27/08/03	Coes Ford D/s	6840	11.0	7.8	160.0	9.1	84.0	0.17	0.23
22/07/03	Coes Ford D/s	5060	7.0	7.3	235.0	9.5	80.0	0.22	0.40
14/08/02	Coes Ford D/s	1500	8.5	7.4	160.0	10.80	94.0	0.25	1.92
17/07/02	Coes Ford D/s	2310	7.0	7.3	181.5	10.00	82.0	0.95	0.95
01/05/02	Coes Ford D/s	-	11.2	7.6	160.00	9.5	90.0	0.23	-
26/09/01	Coes Ford D/s	1200	11.6	8.0	180.0	11.30	-	0.18	-
13/08/01	Coes Ford D/s	770	8.0	8.3	2.8	-	103.0	0.35	-
25/07/01	Coes Ford D/s	899	6.6	7.7	2.1	-	105.0	0.14	-
05/03/01	Coes Ford D/s	-	17.2	7.8	170.00	12.7	136.0	1.23	-
19/02/01	Coes Ford D/s	-	17	7.1	180.00	11.3	118.0	-	-
08/05/00	Coes Ford D/s	-	10.2	7.2	76.00	11.3	104.0	0.64	-
04/05/11	Coes Ford U/s	595	13.5	7.5	210.0	10.20	100.0	0.08	-
13/04/11	Coes Ford U/s	535	16.0	7.3	200.0	10.90	110.0	0.20	-
06/04/11	Coes Ford U/s	478	14.8	7.6	200.0	10.60	105.0	0.20	-
21/04/10	Coes Ford U/s	-	-	-	-	-	-	-	-
24/03/10	Coes Ford U/s	-	15.2	7.2	206.4	9.60	95.8	0.12	-
17/03/10	Coes Ford U/s	363	13.5	-	253.0	8.72	67.0	0.39	-
10/03/10	Coes Ford U/s	-	21.5	7.6	203.1	9.00	103.2	0.14	-
09/04/08	Coes Ford U/s	18	17.7	7.2	270.0	7.10	74.6	0.26	-
02/04/08	Coes Ford U/s	16	15.7	7.3	214.5	6.71	67.0	0.17	-
19/03/08	Coes Ford U/s	18	17.7	6.9	240.0	6.93	71.5	0.21	-
12/03/08	Coes Ford U/s	17	17.2	6.5	210.0	5.54	57.8	1.36	-
02/05/07	Coes Ford U/s	386	13.2	7.2	205.0	9.72	94.7	0.27	-
04/04/07	Coes Ford U/s	510	18.0	7.0	207.2	9.80	100.9	0.18	-
21/03/07	Coes Ford U/s	540	18.9	7.1	230.0	9.62	105.0	0.24	-
07/03/07	Coes Ford U/s	620	19.2	7.2	220.0	9.03	99.7	0.14	-
12/04/06	Coes Ford U/s	56	13.2	7.4	223.3	8.20	80.7	0.60	-
05/04/06	Coes Ford U/s	75	15.4	7.1	226.3	8.10	84.7	0.40	-
15/03/06	Coes Ford U/s	56	16.5	7.4	230.0	8.70	93.3	0.30	-
08/03/06	Coes Ford U/s	49	16.0	7.3	236.1	8.30	90.7	0.50	-
20/04/05	Coes Ford U/s	250	16.0	7.2	190.0	7.50	77.0	0.27	-
13/04/05	Coes Ford U/s	409	13.0	7.6	260.0	9.20	85.0	0.32	-
23/03/05	Coes Ford U/s	305	16.0	7.8	230.0	7.20	75.0	0.24	-
16/03/05	Coes Ford U/s	350	18.5	7.7	180.0	7.90	87.0	0.38	-

31/03/04	Coes Ford U/s	309	13.0	7.4	170.0	9.50	92.0	0.51	-
29/03/04	Coes Ford U/s	200	13.0	7.8	170.0	9.20	90.0	0.60	-
17/03/04	Coes Ford U/s	-	15.5	7.6	170.0	7.20	73.0	0.32	-
10/03/04	Coes Ford U/s	280	21.0	7.5	150.0	7.40	86.0	0.60	-
08/03/04	Coes Ford U/s	130	18.0	8.0	160.0	8.00	88.0	0.20	-
04/03/04	Coes Ford U/s	240	18.0	7.4	150.0	9.70	-	0.18	-
27/08/03	Coes Ford U/s	3240	11.0	8.0	140.0	9.2	85.0	0.15	0.57
22/07/03	Coes Ford U/s	4100	7.5	7.2	120.0	9.5	85.0	0.10	0.34
14/08/02	Coes Ford U/s	1020	8.5	7.4	140.0	10.40	90.0	0.05	1.43
17/07/02	Coes Ford U/s	950	8.1	7.3	147.0	9.20	79.0	1.22	1.55
13/08/01	Coes Ford U/s	615	8.0	7.7	2.6	-	103.0	0.10	-
25/07/01	Coes Ford U/s	612	7.0	7.4	1.3	-	91.0	0.09	-
09/04/03	D/s Moirs Lane	-	-	-	-	-	-	-	-
02/04/03	D/s Moirs Lane	-	12.5	7.3	170.0	8.20	-	0.34	-
26/02/03	D/s Moirs Lane	-	15.1	7.4	160.0	6.10	-	0.24	-
26/02/03	D/s Moirs Lane	-	12.5	7.3	170.0	8.20	-	0.34	-
19/02/03	D/s Moirs Lane	-	13.5	7.4	150.0	5.70	-	0.45	-
27/03/02	D/s Moirs Lane	-	14.5	7.9	160.0	-	76.0	4.00	-
20/03/02	D/s Moirs Lane	-	-	7.5	160.0	-	83.0	0.64	-
06/03/02	D/s Moirs Lane	-	15.0	7.6	150.0	7.30	74.0	0.61	-
20/02/02	D/s Moirs Lane	-	-	7.8	160.0	8.60	83.0	0.10	-
05/04/01	D/s Moirs Lane	-	12.5	7.8	190.0	-	62.0	0.27	-
06/03/01	D/s Moirs Lane	-	13.0	7.8	180.0	-	58.0	0.36	-
28/08/00	D/s Moirs Lane	458	12.0	8.0	200.0	7.80	74.0	0.23	0.71
22/04/99	D/s Moirs Lane	-	13.0	8.2	189.3	-	76.0	0.10	-
16/03/99	D/s Moirs Lane	-	15.0	7.1	175.0	-	74.0	0.19	-
13/05/98	D/s Moirs Lane	-	12.5	8.0	181.0	-	58.0	0.37	-
05/05/98	D/s Moirs Lane	-	11.5	7.0	189.0	9.40	89.0	0.34	-
28/04/98	D/s Moirs Lane	-	13.5	8.1	189.0	-	130.0	1.16	-
01/04/98	D/s Moirs Lane	-	15.5	7.2	192.0	-	85.0	0.37	-
31/03/98	D/s Moirs Lane	-	13.0	6.7	205.0	8.00	77.5	0.61	-
24/03/98	D/s Moirs Lane	-	17.3	7.7	207.0	-	83.0	0.22	-
06/05/97	D/s Moirs Lane	-	13.5	7.5	234.0	-	79.0	0.15	-
29/04/97	D/s Moirs Lane	-	12.2	7.0	238.0	-	82.0	0.22	-
10/04/97	D/s Moirs Lane	-	14.1	7.0	235.0	-	89.0	0.25	-
18/03/97	D/s Moirs Lane	-	12.4	8.0	238.0	-	78.0	0.00	-
05/09/96	D/s Moirs Lane	-	12.9	7.3	255.0	-	90.0	0.40	-
15/08/96	D/s Moirs Lane	-	11.6	7.2	250.0	-	89.5	0.30	-
13/09/95	D/s Moirs Lane	-	11.5	6.6	240.0	8.50	-	1.38	-
23/08/95	D/s Moirs Lane	-	11.0	6.2	260.0	7.90	-	0.55	-
26/04/94	D/s Moirs Lane	-	11.7	6.6	220.0	-	95.5	0.01	-
10/08/10	Harts Creek 1	-	8.2	7.2	273.0	-	81.4	0.48	-
27/07/10	Harts Creek 1	-	10.5	7.4	276.0	-	89.1	0.16	-
13/07/10	Harts Creek 1	-	9.5	7.1	263.0	-	89.3	0.10	-
22/06/10	Harts Creek 1	-	10.9	6.9	275.0	-	84.7	0.21	-
08/06/10	Harts Creek 1	-	10.8	6.8	255.0	-	84.2	0.10	-
25/05/10	Harts Creek 1	-	12.0	6.5	209.5	-	88.7	0.19	-
11/05/10	Harts Creek 1	-	11.8	7.1	205.7	-	89.0	0.23	-
27/04/10	Harts Creek 1	-	12.6	7.2	204.1	-	87.6	0.10	-
13/04/10	Harts Creek 1	-	12.3	7.2	201.6	-	92.6	0.34	-
30/03/10	Harts Creek 1	-	11.9	7.4	200.5	-	96.0	0.20	-
08/04/09	Harts Creek 1	1900	12.0	6.8	216.3	9.52	89.9	0.12	-
27/03/09	Harts Creek 1	-	13.5	7	180.00	9.2	90.0	0.70	-
25/03/09	Harts Creek 1	1360	13.2	7.1	212.2	9.68	92.5	0.20	-
23/03/09	Harts Creek 1	-	11.8	7.3	216.00	9.3	85.0	0.28	-
18/03/09	Harts Creek 1	1700	13.3	7.2	213.6	9.93	95.7	0.20	-
11/03/09	Harts Creek 1	1760	11.6	7.1	216.8	9.93	92.6	0.09	-
23/02/09	Harts Creek 1	-	13.3	7.2	213.00	9.4	90.0	0.29	-
10/08/10	Harts Creek 2	-	8.2	7.1	271.0	-	82.2	0.66	-
27/07/10	Harts Creek 2	-	10.5	7.1	275.0	-	91.1	0.14	-
13/07/10	Harts Creek 2	-	9.3	7.0	263.0	-	91.4	0.26	-
22/06/10	Harts Creek 2	-	10.8	6.9	276.0	-	85.7	0.62	-

08/06/10	Harts Creek 2	-	10.7	6.8	256.0	-	85.1	0.18	-
25/05/10	Harts Creek 2	-	11.8	6.6	209.0	-	86.3	0.25	-
11/05/10	Harts Creek 2	-	11.9	7.1	204.8	-	91.2	0.35	-
27/04/10	Harts Creek 2	-	12.8	7.2	203.0	-	89.5	0.21	-
13/04/10	Harts Creek 2	-	12.8	7.2	198.4	-	98.3	0.23	-
30/03/10	Harts Creek 2	-	12.2	7.1	200.8	-	100.5	0.21	-
10/08/10	Harts Creek 3	-	9.8	7.2	239.0	-	87.9	0.22	-
27/07/10	Harts Creek 3	-	11.3	7.3	249.0	-	91.1	0.20	-
13/07/10	Harts Creek 3	-	10.5	6.9	247.0	-	89.4	0.16	-
22/06/10	Harts Creek 3	-	11.1	7.0	250.0	-	85.1	0.22	-
08/06/10	Harts Creek 3	-	11.0	6.7	251.0	-	84.4	0.22	-
25/05/10	Harts Creek 3	-	12.3	6.6	246.0	-	86.8	0.18	-
11/05/10	Harts Creek 3	-	12.4	6.6	245.0	-	85.5	0.22	-
27/04/10	Harts Creek 3	-	12.9	7.1	246.0	-	82.9	0.35	-
13/04/10	Harts Creek 3	-	13.4	7.2	243.0	-	85.6	0.15	-
30/03/10	Harts Creek 3	-	13.0	7.4	243.0	-	89.0	0.05	-
10/08/10	Harts Creek 4	-	9.7	7.2	240.0	-	88.4	0.38	-
27/07/10	Harts Creek 4	-	11.3	7.4	249.0	-	91.9	0.10	-
13/07/10	Harts Creek 4	-	10.4	7.0	248.0	-	90.6	0.21	-
22/06/10	Harts Creek 4	-	11.1	6.8	250.0	-	86.2	0.25	-
08/06/10	Harts Creek 4	-	11.0	6.8	250.0	-	85.2	0.27	-
25/05/10	Harts Creek 4	-	12.3	6.8	246.0	-	87.1	0.37	-
11/05/10	Harts Creek 4	-	12.6	6.9	244.0	-	87.2	0.19	-
27/04/10	Harts Creek 4	-	12.8	7.0	246.0	-	83.9	0.23	-
13/04/10	Harts Creek 4	-	13.4	7.0	244.0	-	88.0	0.21	-
30/03/10	Harts Creek 4	-	12.8	7.4	244.0	-	91.3	0.08	-
12/03/10	Kaituna R 1	-	10.5	7.2	115.00	11.5	104.0	0.27	-
10/03/10	Kaituna R 1	-	9	7.4	110.00	13.5	110.0	0.05	-
03/03/10	Kaituna R 1	-	13.2	7	100.00	10.9	100.0	0.16	-
26/02/10	Kaituna R 1	-	13	7.1	100.00	11.1	105.0	0.28	-
24/02/10	Kaituna R 1	-	15	7.2	110.00	10.4	110.0	0.37	-
19/02/10	Kaituna R 1	-	13	7.1	100.00	9.3	92.0	0.25	-
17/02/10	Kaituna R 1	-	13	7.4	90.00	9.8	94.0	0.20	-
25/03/09	Kaituna R 1	-	11.2	7.2	80.00	11	102.0	0.46	-
25/03/09	Kaituna R 1	-	10.1	7.1	90.00	11	102.0	0.29	-
20/03/09	Kaituna R 1	-	12.1	6.9	90.00	10.1	108.0	0.27	-
20/03/09	Kaituna R 1	-	12.8	7	90.00	11.4	100.0	0.15	-
18/03/09	Kaituna R 1	-	12.6	7.2	90.00	10.5	100.0	0.12	-
18/03/09	Kaituna R 1	-	11.7	7.1	90.00	10.3	95.0	0.26	-
13/03/09	Kaituna R 1	-	11	7.1	90.00	11.8	-	0.18	-
13/03/09	Kaituna R 1	-	11	6.9	90.00	11.6	-	0.18	-
06/03/09	Kaituna R 1	-	16	7.1	80.00	100	-	0.22	-
06/03/09	Kaituna R 1	-	15.8	7.2	80.00	9.5	-	0.18	-
04/03/09	Kaituna R 1	-	13.1	7.1	80.00	13.1	-	0.26	-
04/03/09	Kaituna R 1	-	12.7	7	80.00	12.7	-	0.26	-
27/02/09	Kaituna R 1	-	12.5	7.2	80.00	12	-	0.32	-
27/02/09	Kaituna R 1	-	12.2	7.1	80.00	10.7	108.0	0.33	-
25/02/09	Kaituna R 1	-	12	8	-	11	-	0.12	-
18/02/09	Kaituna R 1	-	15	7.4	90.00	9.4	100.0	0.31	-
18/02/09	Kaituna R 1	-	16	7	100.00	9	110.0	0.30	-
02/04/08	Kaituna R 1	-	11	7.2	100.00	10.3	101.0	0.21	-
02/04/08	Kaituna R 1	-	11.5	7.2	100.00	13.1	112.0	0.18	-
28/03/08	Kaituna R 1	-	0	6.7	90.00	11.7	110.0	0.17	-
20/03/08	Kaituna R 1	-	14.1	6.8	80.00	11.1	108.0	0.21	-
14/03/08	Kaituna R 1	-	12.5	7.3	80.00	11.1	106.0	0.29	-
14/03/08	Kaituna R 1	-	12.1	7.6	80.00	12.1	114.0	0.29	-
12/03/08	Kaituna R 1	-	12.8	7.1	80.00	12.1	115.0	0.17	-
12/03/08	Kaituna R 1	-	12	6.9	90.00	11	103.0	0.27	-
05/03/08	Kaituna R 1	-	11	6.9	80.00	10.7	102.0	0.19	-
05/03/08	Kaituna R 1	-	11.8	7	80.00	10.5	104.0	0.42	-
27/02/08	Kaituna R 1	-	13.2	6.9	80.00	10.6	103.0	0.18	-
27/02/08	Kaituna R 1	-	15	7.1	80.00	11	112.0	0.18	-

27/02/08	Kaituna R 1	-	15	7.1	80.00	11	112.0	0.43	-
27/02/08	Kaituna R 1	-	13.5	7.3	90.00	11	108.0	0.20	-
20/02/08	Kaituna R 1	-	12	7.4	80.00	14.4	138.0	0.18	-
20/02/08	Kaituna R 1	-	12.8	7.5	80.00	10.8	105.0	0.20	-
20/02/08	Kaituna R 1	-	14.2	6.9	70.00	10.6	105.0	0.28	-
30/03/07	Kaituna R 1	-	16.2	7.2	110.00	9.9	104.0	0.31	-
28/03/07	Kaituna R 1	-	13.2	7.2	120.00	11.3	108.0	0.41	-
28/03/07	Kaituna R 1	-	13.4	7.2	120.00	11.3	107.0	0.39	-
23/03/07	Kaituna R 1	-	12.1	7.5	120.00	11.4	108.0	0.37	-
23/03/07	Kaituna R 1	-	12.2	7.3	110.00	12.6	110.0	0.22	-
21/03/07	Kaituna R 1	-	12.2	7.3	110.00	10.9	103.0	0.22	-
21/03/07	Kaituna R 1	-	11	7.4	110.00	11.9	104.0	0.30	-
16/03/07	Kaituna R 1	-	15	6.8	110.00	10	100.0	0.21	-
09/03/07	Kaituna R 1	-	13	7.6	120.00	14.8	-	0.23	-
09/03/07	Kaituna R 1	-	13.3	7.6	110.00	11.4	112.0	0.21	-
02/03/07	Kaituna R 1	-	13	7.4	120.00	10.8	105.0	0.19	-
28/02/07	Kaituna R 1	-	12	7.4	120.00	13.1	125.0	0.21	-
28/02/07	Kaituna R 1	-	12	7.4	120.00	13.7	129.0	0.27	-
21/02/07	Kaituna R 1	-	15.7	7.3	110.00	10.6	108.0	0.16	-
21/02/07	Kaituna R 1	-	15.8	7.3	110.00	10.4	107.0	0.18	-
21/02/07	Kaituna R 1	-	15.6	7.2	110.00	11.3	115.0	0.24	-
21/02/07	Kaituna R 1	-	13.8	7.3	110.00	12.3	123.0	0.70	-
31/03/06	Kaituna R 1	-	9.5	7.4	100.00	11.4	102.0	0.59	-
31/03/06	Kaituna R 1	-	9.5	7.5	90.00	11.3	100.0	0.16	-
24/03/06	Kaituna R 1	-	10.5	7.5	100.00	11.1	100.0	0.28	-
24/03/06	Kaituna R 1	-	10.5	7.5	100.00	11.1	100.0	0.19	-
22/03/06	Kaituna R 1	-	11.5	7.6	100.00	16.5	140.0	0.44	-
22/03/06	Kaituna R 1	-	11.5	7.6	90.00	11.3	107.0	0.35	-
17/03/06	Kaituna R 1	-	11.2	7.6	100.00	12.2	115.0	0.65	-
15/03/06	Kaituna R 1	-	12.3	7.3	110.00	10.7	102.0	0.27	-
15/03/06	Kaituna R 1	-	12	7.5	110.00	10.5	103.0	0.29	-
10/03/06	Kaituna R 1	-	10.5	7.4	100.00	11.5	102.0	0.26	-
10/03/06	Kaituna R 1	-	10.5	7.6	90.00	13.2	120.0	0.20	-
03/03/06	Kaituna R 1	-	9.7	7.7	110.00	10.3	93.0	0.44	-
03/03/06	Kaituna R 1	-	9.4	7.8	100.00	11.7	104.0	0.56	-
01/03/06	Kaituna R 1	-	13	7.5	100.00	11.9	118.0	0.26	-
01/03/06	Kaituna R 1	-	13.3	7.5	100.00	11.3	110.0	0.26	-
24/02/06	Kaituna R 1	-	10.8	7.4	110.00	11.3	101.0	0.48	-
24/02/06	Kaituna R 1	-	11.5	7.5	110.00	11.2	104.0	0.48	-
22/02/06	Kaituna R 1	-	14.5	7.2	120.00	9.6	96.0	0.38	-
22/02/06	Kaituna R 1	-	14.4	7.2	110.00	9.8	100.0	0.29	-
03/02/06	Kaituna R 2	-	17	7.1	91.00	9.3	100.0	0.36	-
05/03/03	Kaituna R 2	-	16	8.1	130.00	8.2	86.0	0.50	-
12/08/98	Knights Stream	272	10.8	6.8	220.0	-	80.0	0.50	0.60
05/05/98	Knights Stream	335	11.0	6.9	202.0	10.40	-	0.85	0.95
03/09/97	Knights Stream	939	12.7	7.2	250.0	6.60	-	0.07	0.27
16/08/10	Liffey Stream D/s	1030	12.0	6.9	270.0	10.09	94.3	0.36	1.40
03/08/10	Liffey Stream D/s	229	12.1	7.1	270.0	9.96	92.6	0.27	1.03
21/07/10	Liffey Stream D/s	559	11.9	7.1	269.0	10.00	92.0	0.08	2.88
06/10/11	Liffey Stream Lincoln	-	12.2	6.9	263.0	-	72.1	0.45	-
11/05/11	Liffey Stream Lincoln	-	14.7	6.9	260.0	-	90.0	0.05	-
03/05/10	Liffey Stream Lincoln	-	12.8	6.8	303.0	-	69.9	0.15	-
06/09/09	Liffey Stream Lincoln	-	13	7.2	191.00	9.3	83.0	0.34	-
04/04/09	Liffey Stream Lincoln	-	14.8	6.8	303.0	-	77.5	0.04	-
13/11/08	Liffey Stream Lincoln	-	14.5	7.0	230.0	-	77.5	0.37	-
13/11/08	Liffey Stream Lincoln	-	14.5	7	230.00	7.9	77.0	0.37	-
22/04/08	Liffey Stream Lincoln	-	10.6	7.2	100.0	-	78.3	0.04	-
22/04/08	Liffey Stream Lincoln	-	10.6	7.2	100.00	8.6	78.0	0.09	-
09/10/07	Liffey Stream Lincoln	-	12	7	148.00	8.2	78.0	0.52	-
07/08/07	Liffey Stream Lincoln	-	11.7	6.8	187.0	-	87.1	0.18	-
07/08/07	Liffey Stream Lincoln	-	11.7	6.8	187.00	9.4	87.0	0.18	-
02/08/11	Liffey Stream U/s	559	11.1	7.2	277.0	9.79	88.5	0.05	0.09

20/07/11	Liffey Stream U/s	537	11.5	7.2	274.0	9.44	86.0	0.10	1.10
16/08/10	LII D/s Liffey	1338	11.9	7.2	258.0	10.24	95.7	0.34	1.52
03/08/10	LII D/s Moirs	1058	12.2	7.1	258.0	10.11	94.2	0.19	0.64
21/07/10	LII D/s Moirs	1268	12.0	7.1	249.0	10.17	93.8	0.15	1.18
12/04/00	LII D/s Moirs	-	12.5	8.3	170.0	-	98.0	0.26	-
10/04/00	LII D/s Moirs	-	13.0	8.0	170.0	-	83.0	0.50	-
29/03/00	LII D/s Moirs	-	17.0	8.0	160.0	-	90.0	0.16	-
17/03/00	LII D/s Moirs	-	12.8	7.8	160.0	-	77.0	0.30	-
15/03/00	LII D/s Moirs	-	13.5	7.7	180.0	-	60.0	0.39	-
06/03/00	LII D/s Moirs	-	13.5	7.8	130.0	-	87.0	0.17	-
06/05/97	LII D/s Moirs	-	13.2	7.5	255.0	-	82.0	0.52	-
29/04/97	LII D/s Moirs	-	12.9	7.0	255.0	-	85.0	2.66	-
10/04/97	LII D/s Moirs	-	13.5	7.0	259.0	-	79.0	0.16	-
18/03/97	LII D/s Moirs	-	12.7	7.7	254.0	-	64.0	2.90	-
05/09/96	LII D/s Moirs	-	12.9	7.2	276.0	-	95.0	0.50	-
15/08/96	LII D/s Moirs	-	12.0	7.5	257.0	-	90.0	0.50	-
13/09/95	LII D/s Moirs	-	11.5	6.6	250.0	9.00	-	0.57	-
23/08/95	LII D/s Moirs	-	11.0	6.5	270.0	8.80	-	0.95	-
26/04/94	LII D/s Moirs	-	11.9	6.9	210.0	-	86.3	0.03	-
25/08/93	LII D/s Moirs	-	11.0	7.4	232.0	10.76	-	-	-
17/08/93	LII D/s Moirs	-	11.5	6.8	243.0	9.43	-	-	-
10/08/93	LII D/s Moirs	-	11.5	7.6	449.0	9.67	-	-	-
03/08/93	LII D/s Moirs	-	11.8	7.6	422.0	12.20	-	-	-
27/07/93	LII D/s Moirs	-	12.3	7.3	300.0	10.41	-	-	-
20/07/93	LII D/s Moirs	-	12.0	7.3	467.0	18.30	-	-	-
06/08/07	LII D/s Springs Creek	2400	12.1	7.7	300.0	8.76	83.0	0.16	1.51
24/07/07	LII D/s Springs Creek	2024	11.5	6.9	270.0	10.04	90.0	0.37	1.18
11/07/07	LII D/s Springs Creek	836	11.2	7.0	234.0	9.37	85.1	0.15	1.33
07/08/06	LII D/s Springs Creek	9876	10.4	6.5	197.5	8.07	74.7	1.40	2.33
25/07/06	LII D/s Springs Creek	1830	11.7	7.5	200.0	9.12	83.0	0.17	0.17
31/08/05	LII Spring	-	15.0	7.8	180.0	17.00	-	0.08	0.57
29/08/05	LII Spring	-	15.0	7.4	170.0	29.75	93.0	0.27	3.68
08/08/05	LII Spring	-	13.0	7.1	190.0	13.50	66.0	0.19	0.35
13/07/05	LII Spring	-	12.5	7.1	210.0	5.58	56.0	0.67	6.00
15/09/04	LII Spring	-	12.0	6.5	170.0	6.90	-	0.93	1.33
09/08/04	LII Spring	-	13.7	7.1	150.0	6.00	-	0.23	0.71
27/07/04	LII Spring	-	13.0	6.9	150.0	4.30	-	0.39	0.66
14/07/04	LII Spring	-	13.0	6.9	160.0	4.20	-	0.87	0.00
21/08/03	LII Spring	-	12.0	7.1	170.0	6.2	59.0	0.39	0.48
22/07/03	LII Spring	-	12.0	7.0	170.0	6.4	66.0	0.24	0.66
27/03/02	LII Spring	-	14.5	7.8	150.0	-	48.0	3.90	-
20/03/02	LII Spring	-	-	7.4	150.0	-	65.0	0.35	-
06/03/02	LII Spring	-	13.7	7.4	150.0	9.90	98.0	0.42	-
06/03/02	LII Spring	-	13.7	7.4	150.0	-	96.0	0.20	1.32
27/02/02	LII Spring	-	13.0	7.8	150.0	-	48.0	0.20	1.32
20/02/02	LII Spring	-	-	7.6	150.0	6.80	55.0	0.14	-
12/04/00	LII Spring	-	12.5	8.1	180.0	-	80.0	0.22	-
10/04/00	LII Spring	-	12.7	7.8	170.0	-	67.0	0.70	-
29/03/00	LII Spring	-	15.0	7.8	180.0	-	70.0	0.20	-
17/03/00	LII Spring	-	12.5	7.9	170.0	-	63.0	0.10	-
15/03/00	LII Spring	-	12.3	8.1	180.0	-	68.0	0.55	-
06/03/00	LII Spring	-	13.0	7.6	130.0	-	59.0	0.06	-
06/08/07	LII U/s Springs Creek	2500	12.2	7.5	301.0	9.07	84.3	0.44	5.01
24/07/07	LII U/s Springs Creek	2175	11.2	7.2	282.0	9.93	90.8	0.23	2.98
11/07/07	LII U/s Springs Creek	-	11.0	7.0	281.0	9.55	86.0	0.16	1.05
07/08/06	LII U/s Springs Creek	-	9.6	6.5	250.0	8.33	74.8	1.20	1.94
25/07/06	LII U/s Springs Creek	1494	11.2	7.3	230.0	9.84	88.4	0.09	0.63
25/08/93	LII U/s Springs Creek	-	11.0	7.4	258.0	9.57	-	-	-
17/08/93	LII U/s Springs Creek	-	11.3	6.7	274.0	9.82	-	-	-
10/08/93	LII U/s Springs Creek	-	11.2	7.6	485.0	9.74	-	-	-
03/08/93	LII U/s Springs Creek	-	11.9	7.5	446.0	14.19	-	-	-
27/07/93	LII U/s Springs Creek	-	12.0	7.4	114.0	10.68	-	-	-

20/07/93	LII U/s Springs Creek	-	12.0	7.4	398.0	16.40	-	-	-
17/08/09	Lower Halswell R	2790	11.4	6.8	407.0	8.83	82.0	0.40	1.56
04/08/09	Lower Halswell R	1260	9.2	7.2	314.0	9.77	86.8	0.22	2.75
22/07/09	Lower Halswell R	1680	8.5	7.2	354.0	9.03	79.0	0.35	0.46
02/08/11	McDonald Rd Bridge	2208	10.7	7.3	246.0	10.23	91.9	0.12	0.47
20/07/11	McDonald Rd Bridge	2200	11.9	6.8	240.0	9.90	91.5	0.14	2.07
31/08/05	McDonald Rd Bridge	2211	14.0	7.5	180.0	20.00	-	0.25	0.49
29/08/05	McDonald Rd Bridge	-	14.5	7.6	170.0	21.50	89.0	0.13	1.12
08/08/05	McDonald Rd Bridge	2740	12.0	6.8	150.0	25.00	67.0	0.35	0.57
13/07/05	McDonald Rd Bridge	2260	12.0	7.6	202.0	9.20	86.0	0.51	0.98
15/09/04	McDonald Rd Bridge	-	11.5	7.5	180.0	10.50	-	0.13	0.59
09/08/04	McDonald Rd Bridge	1919	11.0	7.4	220.0	7.90	-	0.15	0.70
27/07/04	McDonald Rd Bridge	2210	11.9	6.9	160.0	7.80	-	0.59	0.94
14/07/04	McDonald Rd Bridge	-	12.5	7.4	170.0	11.20	-	0.22	4.00
01/05/04	McDonald Rd Bridge	-	10.8	7.8	220.00	9.5	87.0	1.30	-
21/08/03	McDonald Rd Bridge	2080	10.5	7.4	170.0	6.8	63.0	0.30	0.30
22/07/03	McDonald Rd Bridge	2340	10.0	7.2	180.0	6.6	58.0	0.11	0.37
09/04/03	McDonald Rd Bridge	1659	14.0	7.7	200.0	10.30	103.0	0.33	0.50
15/10/94	McDonald Rd Bridge	-	-	7.3	170.0	10.20	-	0.12	-
12/10/94	McDonald Rd Bridge	820	11.5	6.9	159.0	6.00	-	0.37	-
29/09/94	McDonald Rd Bridge	3930	11.5	7.0	175.0	7.40	-	0.36	-
28/09/94	McDonald Rd Bridge	-	12.0	7.4	190.0	8.20	-	0.60	-
22/09/94	McDonald Rd Bridge	-	-	6.9	172.0	8.86	-	0.13	-
21/09/94	McDonald Rd Bridge	1430	11.5	6.7	180.0	7.72	-	0.13	-
14/09/94	McDonald Rd Bridge	-	11.5	7.0	220.0	12.40	-	0.23	-
13/09/94	McDonald Rd Bridge	-	12.0	7.2	185.0	11.38	-	0.48	-
08/09/94	McDonald Rd Bridge	-	11.0	6.9	175.0	8.18	-	0.44	-
31/08/94	McDonald Rd Bridge	750	11.0	7.0	670.0	-	-	0.00	-
30/08/94	McDonald Rd Bridge	-	11.5	7.0	180.0	8.00	-	0.33	-
18/08/94	McDonald Rd Bridge	1960	11.0	7.1	556.0	10.00	-	0.79	-
18/08/94	McDonald Rd Bridge	-	-	7.2	183.0	5.00	-	0.26	-
17/08/94	McDonald Rd Bridge	-	10.5	7.1	264.0	10.00	-	0.35	-
10/08/94	McDonald Rd Bridge	1320	9.0	7.0	550.0	-	-	1.90	-
26/04/94	McDonald Rd Bridge	-	12.1	7.4	210.0	-	38.9	0.10	-
25/08/93	McDonald Rd Bridge	2840	10.6	7.4	223.0	9.65	-	-	-
17/08/93	McDonald Rd Bridge	2520	11.3	5.9	229.0	8.82	-	-	-
10/08/93	McDonald Rd Bridge	3490	11.1	6.9	412.0	7.73	-	-	-
03/08/93	McDonald Rd Bridge	2060	11.8	7.6	375.0	13.45	-	-	-
27/07/93	McDonald Rd Bridge	2810	12.0	7.6	952.0	10.60	-	-	-
20/07/93	McDonald Rd Bridge	3120	11.3	7.3	341.0	19.00	-	-	-
15/09/04	Moirs Farm Ditch 1	-	9.5	7.0	1180.0	1.50	-	10.08	9.88
09/08/04	Moirs Farm Ditch 1	-	7.0	6.8	1350.0	5.10	-	3.14	4.18
27/07/04	Moirs Farm Ditch 1	-	8.0	6.9	560.0	2.00	-	14.00	14.80
14/07/04	Moirs Farm Ditch 1	-	6.3	6.9	510.0	1.80	-	17.00	95.00
15/09/04	Moirs Farm Ditch 2	-	10.0	7.6	3040.0	0.50	-	1.20	13.00
09/08/04	Moirs Farm Ditch 2	-	9.0	7.7	1560.0	1.00	-	100.00	96.00
27/07/04	Moirs Farm Ditch 2	-	7.0	7.2	2300.0	0.30	-	220.00	1300.00
14/07/04	Moirs Farm Ditch 2	-	7.8	7.6	2520.0	0.30	-	82.00	-
14/08/02	Moirs Farm Ditch 2	-	7.5	7.8	5040.0	0.30	4.0	115.00	188.00
17/07/02	Moirs Farm Ditch 2	-	5.0	7.1	3100.0	0.40	7.0	121.00	158.40
06/03/02	Moirs Farm Ditch 2	-	26.2	7.8	3370.0	-	-	104.25	1130.00
27/02/02	Moirs Farm Ditch 2	-	14.6	8.0	2500.0	-	2.0	104.25	1130.00
05/04/01	Moirs Farm Ditch 2	-	11.0	7.9	1660.0	-	9.0	57.50	-
06/03/01	Moirs Farm Ditch 2	-	13.6	7.9	1640.0	-	9.0	61.00	-
12/04/00	Moirs Farm Ditch 2	-	11.5	7.7	1720.0	-	0.4	231.00	-
10/04/00	Moirs Farm Ditch 2	-	13.0	7.6	1800.0	-	5.0	145.00	-
29/03/00	Moirs Farm Ditch 2	-	14.0	7.6	1790.0	-	16.0	94.00	-
17/03/00	Moirs Farm Ditch 2	-	13.6	7.5	2000.0	-	0.0	73.00	-
15/03/00	Moirs Farm Ditch 2	-	10.1	7.6	1830.0	-	5.0	68.50	-
06/03/00	Moirs Farm Ditch 2	-	20.0	7.5	1030.0	-	58.0	72.00	-
15/09/04	Moirs Farm Ditch 3	-	13.0	7.4	260.0	15.40	-	0.36	1.40
09/08/04	Moirs Farm Ditch 3	-	10.5	7.4	540.0	7.50	-	0.27	0.70

27/07/04	Moirs Farm Ditch 3	-	11.0	6.9	220.0	0.30	-	0.39	0.73
14/07/04	Moirs Farm Ditch 3	-	11.5	7.2	230.0	2.50	-	0.14	97.00
31/08/05	Moirs Farm Ditch 4	-	13.0	7.4	190.0	14.00	-	0.40	0.49
29/08/05	Moirs Farm Ditch 4	-	15.5	6.8	230.0	28.00	67.0	0.85	0.09
08/08/05	Moirs Farm Ditch 4	-	12.0	7.3	290.0	69.00	46.0	0.30	0.92
13/07/05	Moirs Farm Ditch 4	-	10.8	7.3	234.0	12.00	106.0	0.15	3.16
02/08/11	Moirs Lane Bridge	751	10.6	6.9	245.0	9.27	83.8	0.18	0.54
20/07/11	Moirs Lane Bridge	897	11.0	7.2	268.0	9.59	84.7	0.13	2.15
16/08/10	Moirs Lane Bridge	907	12.0	7.1	241.0	9.70	91.3	0.51	1.38
03/08/10	Moirs Lane Bridge	800	12.5	7.0	241.0	9.51	92.0	0.31	0.9
21/07/10	Moirs Lane Bridge	559	12.2	7.2	243.0	10.03	92.9	0.18	1.54
31/08/05	Moirs Lane Bridge	390	14.0	7.5	170.0	13.00	-	0.19	0.46
29/08/05	Moirs Lane Bridge	-	14.5	7.4	170.0	23.50	99.0	0.22	0.08
08/08/05	Moirs Lane Bridge	934	12.0	6.6	170.0	26.50	62.0	0.19	0.34
13/07/05	Moirs Lane Bridge	1350	12.0	6.8	197.0	6.10	58.0	0.32	0.62
09/04/03	Moirs Lane Bridge	-	13.8	7.6	180.0	4.70	-	0.14	0.52
26/02/03	Moirs Lane Bridge	-	12.7	7.6	170.0	6.80	-	0.12	-
19/02/03	Moirs Lane Bridge	-	13.8	7.8	150.0	5.90	-	0.49	-
14/08/02	Moirs Lane Bridge	610	12.0	7.4	150.0	8.00	76.0	0.16	1.31
17/07/02	Moirs Lane Bridge	580	10.8	7.3	163.5	8.00	74.0	0.79	0.67
06/03/02	Moirs Lane Bridge	-	15.0	7.5	150.0	-	97.0	0.46	0.81
27/02/02	Moirs Lane Bridge	-	12.5	7.8	160.0	-	62.0	0.46	0.81
26/09/01	Moirs Lane Bridge	460	14.0	7.8	160.0	10.90	-	1.40	-
22/04/99	Moirs Lane Bridge	-	13.5	8.0	192.5	-	82.0	0.00	-
16/03/99	Moirs Lane Bridge	-	16.0	7.2	180.0	-	65.0	0.10	-
13/05/98	Moirs Lane Bridge	-	12.0	7.9	186.0	-	80.0	0.16	-
05/05/98	Moirs Lane Bridge	-	12.0	6.4	179.0	9.30	86.0	0.28	-
28/04/98	Moirs Lane Bridge	-	13.0	8.1	193.0	-	85.0	0.75	-
01/04/98	Moirs Lane Bridge	-	16.0	7.7	304.0	-	84.0	1.77	-
31/03/98	Moirs Lane Bridge	-	13.5	7.2	208.0	8.20	80.0	0.55	-
24/03/98	Moirs Lane Bridge	-	18.0	7.8	202.0	-	82.0	0.19	-
15/05/07	Nottingham Stream	-	12.8	7	290.00	7	70.0	0.35	-
15/05/07	Nottingham Stream	-	12.5	7.2	290.00	7.9	77.0	-	-
15/05/07	Nottingham Stream	-	12.9	7.2	290.00	8.1	78.0	0.23	-
15/05/07	Nottingham Stream	-	13	7.2	290.00	8	78.0	0.45	-
21/08/03	Pannetts Bridge	2660	10.5	7.4	170.0	7.4	67.0	0.19	0.20
22/07/03	Pannetts Bridge	3550	9.1	7.2	200.0	8	71.0	0.11	0.19
26/04/94	Pannetts Bridge	-	11.6	7.6	200.0	-	77.0	0.05	-
08/03/10	Selwyn R Coalgate	-	17.3	7.3	95.00	10	107.0	0.14	-
23/03/09	Selwyn R Coalgate	-	13.4	7.5	95.00	10.6	104.0	0.20	-
29/02/08	Selwyn R Coalgate	-	15.6	7.7	80.00	9.9	103.0	0.09	-
10/05/07	Selwyn R Coalgate	-	12.3	7.3	90.00	12	113.0	0.19	-
10/05/07	Selwyn R Coalgate	-	11	7	100.00	11.3	103.0	0.17	-
10/05/07	Selwyn R Coalgate	-	13	7.3	90.00	11.1	107.0	0.24	-
09/05/07	Selwyn R Coalgate	-	10.5	7.2	80.00	11.9	108.0	0.28	-
09/05/07	Selwyn R Coalgate	-	10	7	60.00	11.2	100.0	0.47	-
09/05/07	Selwyn R Coalgate	-	11	7.3	80.00	11.4	108.0	0.12	-
09/05/07	Selwyn R Coalgate	-	10	7.1	60.00	11.5	101.0	0.22	-
10/04/07	Selwyn R Coalgate	-	13	7.2	90.00	11.3	107.0	0.22	-
23/04/02	Selwyn R Coalgate	-	13.5	7.8	70.00	11.2	110.0	0.44	-
23/04/02	Selwyn R Coalgate	-	13.5	8.3	70.00	10.9	107.0	0.73	-
08/05/01	Selwyn R Coalgate	-	12.5	7.6	-	10.7	102.0	1.15	-
03/08/10	Sergeants Rd drain	265	11.9	7.3	194.1	8.34	77.7	0.41	1.24
21/07/10	Sergeants Rd drain	209	12.3	7.1	222.0	8.32	77.5	0.29	1.42
16/08/10	Sergeants Rd Drain	283	11.7	7.1	194.1	8.21	76.6	0.58	1.29
04/05/11	Silverstream	345	12.0	7.1	230.0	9.30	98.0	0.40	-
13/04/11	Silverstream	115	12.5	7.8	190.0	10.60	102.0	0.23	-
06/04/11	Silverstream	240	13.1	7.0	190.0	9.00	85.0	0.45	-
21/04/10	Silverstream	59	12.0	7.3	262.0	8.31	77.8	0.20	-
24/03/10	Silverstream	32	15.0	6.8	275.0	6.60	67.0	0.39	-
17/03/10	Silverstream	307	14.6	7.1	243.0	7.99	80.7	0.32	-
10/03/10	Silverstream	-	17.2	7.2	205.5	10.23	105.9	0.18	-

09/04/08	Silverstream	13	13.0	7.2	255.0	8.75	82.3	0.37	-
02/04/08	Silverstream	15	14.5	6.9	260.0	8.21	80.9	0.64	-
19/03/08	Silverstream	14	13.7	6.7	269.0	7.41	71.4	1.15	-
12/03/08	Silverstream	18	17.8	6.9	230.0	4.70	49.0	0.13	-
02/05/07	Silverstream	675	12.8	6.8	288.0	8.65	83.6	0.70	-
04/04/07	Silverstream	355	15.2	6.9	282.0	9.37	96.1	0.20	-
21/03/07	Silverstream	342	17.0	7.2	320.0	9.02	94.8	0.10	-
07/03/07	Silverstream	217	18.4	7.1	310.0	8.22	89.2	0.73	-
12/04/06	Silverstream	85	12.2	7.7	216.7	8.40	79.0	0.60	-
05/04/06	Silverstream	98	14.9	7.2	227.3	8.10	83.3	0.30	-
15/03/06	Silverstream	39	15.2	7.4	223.3	7.40	76.7	0.40	-
08/03/06	Silverstream	45	15.0	7.4	230.0	6.80	69.0	0.40	-
20/04/05	Silverstream	205	-	6.9	229.0	-	-	0.20	-
13/04/05	Silverstream	130	-	-	-	-	-	-	-
23/03/05	Silverstream	139	-	-	-	-	-	0.80	-
16/03/05	Silverstream	130	15.5	7.6	240.0	7.20	74.0	0.67	-
31/03/04	Silverstream	-	-	-	-	-	-	-	-
29/03/04	Silverstream	40	13.0	7.6	240.0	8.60	84.0	0.68	-
17/03/04	Silverstream	-	-	-	-	-	-	-	-
10/03/04	Silverstream	-	-	-	-	-	-	-	-
08/03/04	Silverstream	70	16.0	7.6	210.0	5.60	57.0	0.30	-
04/03/04	Silverstream	-	-	-	-	-	-	-	-
27/08/03	Silverstream	380	11.0	8.0	240.0	9.1	84.0	1.13	0.32
22/07/03	Silverstream	440	7.5	7.4	140.0	9.6	85.0	0.16	0.21
14/08/02	Silverstream	571	8.5	7.3	190.0	10.20	88.0	0.21	1.18
17/07/02	Silverstream	390	7.0	7.3	218.0	10.50	86.0	0.16	0.62
13/08/01	Silverstream	377	6.0	7.6	4.0	-	87.0	0.42	-
25/07/01	Silverstream	565	5.5	7.3	3.9	-	85.0	0.29	-
06/08/07	Springs Creek	196	13.0	7.7	174.9	8.40	79.5	0.16	0.96
24/07/07	Springs Creek	426	12.3	7.1	169.4	9.36	85.4	0.33	0.63
11/07/07	Springs Creek	339	12.0	7.1	168.7	9.10	83.5	0.33	1.32
07/08/06	Springs Creek	601	11.1	6.6	203.0	-	-	0.80	4.60
25/07/06	Springs Creek	440	12.1	7.3	160.0	9.33	85.5	0.08	0.26
06/08/07	Springs Creek Spring	145	13.5	7.8	162.4	7.71	73.6	0.19	4.89
24/07/07	Springs Creek Spring	130	13.1	7.3	162.8	7.90	73.5	0.15	1.05
11/07/07	Springs Creek Spring	98	12.4	7.2	162.8	7.40	69.0	0.50	2.00
07/08/06	Springs Creek Spring	143	11.2	6.6	167.3	8.12	76.6	0.40	2.17
25/07/06	Springs Creek Spring	99	12.4	7.1	150.0	7.91	73.3	0.14	0.37
17/08/09	Upper Halswell R	921	10.9	6.9	309.0	8.60	79.5	0.30	1.29
04/08/09	Upper Halswell R	1072	9.6	6.9	269.0	9.62	86.1	0.48	1.29
22/07/09	Upper Halswell R	1799	8.5	7.1	284.0	9.67	84.6	0.15	0.70
02/04/03	U/s Moirs Lane	-	12.7	7.6	170.0	6.80	-	0.12	-
26/02/03	U/s Moirs Lane	-	15.6	7.8	160.0	7.30	-	0.07	-
05/04/01	U/s Moirs Lane	-	12.5	7.7	190.0	-	65.0	0.12	-
06/03/01	U/s Moirs Lane	-	13.0	7.6	160.0	-	63.0	0.22	-
28/08/00	U/s Moirs Lane	457	12.3	7.9	200.0	9.50	88.0	0.06	0.28
07/04/04	Waikerekwai 1	-	11.9	7.6	190.0	7.10	68.0	0.04	1.16
01/04/04	Waikerekwai 1	-	13.1	7.1	205.0	8.30	80.0	0.53	2.11
26/03/04	Waikerekwai 1	-	12.1	8.2	185.0	8.00	76.0	0.23	1.03
19/03/04	Waikerekwai 1	-	13.5	6.6	184.0	6.60	65.0	0.58	-
07/04/04	Waikerekwai 2	-	12.5	7.4	210.0	5.90	56.0	0.02	0.48
01/04/04	Waikerekwai 2	-	14.2	7.0	185.0	7.10	69.0	0.32	0.19
26/03/04	Waikerekwai 2	-	14.1	8.2	185.0	5.40	54.0	0.22	0.60
19/03/04	Waikerekwai 2	-	13.9	6.4	200.0	3.90	40.0	0.43	-
07/04/04	Waikerekwai 3	-	13.2	7.4	210.0	5.70	55.0	0.11	3.33
01/04/04	Waikerekwai 3	-	16.1	6.9	208.0	6.40	67.0	0.29	0.17
26/03/04	Waikerekwai 3	-	14.9	7.9	155.0	6.40	65.0	0.25	0.60
19/03/04	Waikerekwai 3	-	14.9	6.0	200.0	5.10	52.0	0.47	-
07/04/04	Waikerekwai 4	-	11.0	7.6	250.0	10.00	92.0	0.29	0.94
01/04/04	Waikerekwai 4	-	-	-	-	-	-	-	-
26/03/04	Waikerekwai 4	-	12.0	7.7	160.0	3.50	34.0	0.14	0.50
19/03/04	Waikerekwai 4	-	-	-	-	-	-	-	-

07/04/04	Waikerekwai 5	-	13.0	7.3	205.0	6.10	59.0	0.13	0.75
01/04/04	Waikerekwai 5	-	16.8	7.0	183.0	7.10	75.0	0.32	0.28
26/03/04	Waikerekwai 5	-	14.1	7.6	176.0	6.50	65.0	0.16	0.72
19/03/04	Waikerekwai 5	-	14.6	6.0	195.0	5.40	54.0	0.21	-
06/08/07	X-Drain	-	13.0	7.5	206.7	7.68	73.1	0.15	9.30
24/07/07	X-Drain	-	12.9	7.1	211.7	7.90	73.0	0.21	0.83
11/07/07	X-Drain	-	12.2	7.1	168.0	7.96	73.3	0.12	9.32
04/05/09	Yarrs Lagoon 1	-	10.1	6.9	243.0	7.80	70.0	0.26	-
06/04/09	Yarrs Lagoon 1	-	13.4	-	243.0	9.10	87.9	0.16	-
26/03/09	Yarrs Lagoon 1	-	13.2	6.7	240.0	7.60	72.3	0.35	-
04/05/09	Yarrs Lagoon 2	-	10.2	6.9	241.0	7.70	68.4	0.26	-
06/04/09	Yarrs Lagoon 2	-	13.3	-	241.0	9.00	86.5	0.24	-
26/03/09	Yarrs Lagoon 2	-	13.1	6.7	236.0	7.00	67.2	0.14	-
04/05/09	Yarrs Lagoon 3	-	10.3	6.9	235.0	7.70	69.2	0.11	-
06/04/09	Yarrs Lagoon 3	-	13.2	-	233.0	7.90	75.8	0.23	-
26/03/09	Yarrs Lagoon 3	-	13.3	6.8	230.0	7.34	69.8	0.19	-
04/05/09	Yarrs Lagoon 4	-	10.2	6.9	233.0	7.70	67.6	0.27	-
06/04/09	Yarrs Lagoon 4	-	13.2	-	232.0	7.60	74.0	0.65	-
26/03/09	Yarrs Lagoon 4	-	13.3	6.9	215.0	7.30	69.5	0.22	-
04/05/09	Yarrs Lagoon 5	-	-	6.8	-	-	-	0.28	-
06/04/09	Yarrs Lagoon 5	-	13.4	-	162.6	6.37	61.2	0.30	-
26/03/09	Yarrs Lagoon 5	-	-	6.9	157.0	-	-	0.22	-

Appendix 2, Table 3. Water quality parameters; NO₃, NH₃, Total N, turbidity, TSS, FC and E Coli.

Date	Name	NO ₃ -N (mg/L)	Total N (mg/L)	NH ₃ (mg/L)	Water turbidity (NTU)	TSS (non filterable solids) (mg/L)	Coliforms (CFU/100ml)	E. Coli (CFU/100ml)
10/08/10	Birdlings Brook 1	2.80	-	-	73.87	-	9333	4067
27/07/10	Birdlings Brook 1	5.80	-	-	7.92	-	500	133
13/07/10	Birdlings Brook 1	4.40	-	-	6.29	-	567	433
22/06/10	Birdlings Brook 1	4.60	-	-	6.53	-	1467	550
08/06/10	Birdlings Brook 1	4.00	-	-	29.72	-	4267	1850
25/05/10	Birdlings Brook 1	3.40	-	-	3.06	-	367	67
11/05/10	Birdlings Brook 1	2.70	-	-	46.15	-	867	483
27/04/10	Birdlings Brook 1	4.50	-	-	1.62	-	483	150
13/04/10	Birdlings Brook 1	2.00	-	-	0.33	-	800	200
30/03/10	Birdlings Brook 1	2.60	-	-	4.58	-	2227	173
10/08/10	Birdlings Brook 2	3.40	-	-	43.52	-	8267	1600
27/07/10	Birdlings Brook 2	2.20	-	-	6.15	-	683	83
13/07/10	Birdlings Brook 2	4.00	-	-	3.16	-	867	67
22/06/10	Birdlings Brook 2	4.20	-	-	9.44	-	3167	500
08/06/10	Birdlings Brook 2	3.20	-	-	91.81	-	5667	6067
25/05/10	Birdlings Brook 2	3.40	-	-	4.69	-	300	217
11/05/10	Birdlings Brook 2	3.90	-	-	52.06	-	1167	100
27/04/10	Birdlings Brook 2	3.00	-	-	19.88	-	3350	67
13/04/10	Birdlings Brook 2	3.60	-	-	2.67	-	2000	200
30/03/10	Birdlings Brook 2	2.10	-	-	12.74	-	582	582
10/08/10	Boggy Creek 1	1.20	-	-	96.07	-	8600	22733
27/07/10	Boggy Creek 1	3.40	-	-	5.64	-	1617	583
13/07/10	Boggy Creek 1	3.50	-	-	6.59	-	1833	433
22/06/10	Boggy Creek 1	3.70	-	-	6.64	-	2083	317
08/06/10	Boggy Creek 1	2.00	-	-	47.02	-	3233	8300
25/05/10	Boggy Creek 1	3.50	-	-	3.08	-	783	817
11/05/10	Boggy Creek 1	3.80	-	-	35.78	-	1033	733
27/04/10	Boggy Creek 1	3.50	-	-	2.89	-	583	633
13/04/10	Boggy Creek 1	3.30	-	-	0.84	-	1100	240
30/03/10	Boggy Creek 1	3.20	-	-	2.32	-	1573	427
10/08/10	Boggy Creek 2	1.20	-	-	67.53	-	7600	14467
27/07/10	Boggy Creek 2	1.00	-	-	7.59	-	1800	250
13/07/10	Boggy Creek 2	2.90	-	-	7.22	-	967	1650
22/06/10	Boggy Creek 2	3.20	-	-	9.51	-	2700	867
08/06/10	Boggy Creek 2	3.20	-	-	49.19	-	3667	4750
25/05/10	Boggy Creek 2	3.10	-	-	4.41	-	1100	5417
11/05/10	Boggy Creek 2	4.10	-	-	38.04	-	483	2550
27/04/10	Boggy Creek 2	3.30	-	-	1.48	-	367	2467
13/04/10	Boggy Creek 2	3.00	-	-	1.36	-	1560	840
30/03/10	Boggy Creek 2	2.40	-	-	5.81	-	582	2564
08/05/00	Chamberlains Ford	0.01	-	-	35.00	-	-	-
16/09/99	Chamberlains Ford	5.69	8.0	-	10.40	16.25	116	78
03/09/99	Chamberlains Ford	5.00	-	-	0.20	1.59	24	33
05/08/99	Chamberlains Ford	2.70	-	-	12.50	6.46	323	280
16/08/98	Chamberlains Ford	5.50	6.8	-	1.30	0.15	-	-
05/08/98	Chamberlains Ford	4.50	28.50	-	0.50	-	50	75
29/07/98	Chamberlains Ford	4.55	11.3	-	0.10	0.10	-	-
25/08/97	Chamberlains Ford	0.80	4.5	-	<15	1.89	539	60
08/03/10	Coes Ford	3.6	-	-	2	-	-	-
29/02/08	Coes Ford	4.1	-	-	4	-	-	-
26/02/07	Coes Ford	3.8	-	-	1	-	-	-
04/05/11	Coes Ford Downstream	3.00	-	-	0.00	1.5	-	-
13/04/11	Coes Ford Downstream	4.70	-	-	6.00	11.55	-	-
06/04/11	Coes Ford Downstream	4.30	-	-	6.00	1.25	-	-
21/04/10	Coes Ford Downstream	2.20	-	-	1.54	1.20	1394	169
24/03/10	Coes Ford Downstream	2.10	-	-	8.61	2.46	1550	56

17/03/10	Coes Ford Downstream	2.20	-	-	1.43	9.80	1600	160
10/03/10	Coes Ford Downstream	1.96	-	-	24.70	1.80	3225	119
26/11/09	Coes Ford Downstream	-	-	-	2	-	-	-
13/10/09	Coes Ford Downstream	4.3	-	-	-	-	-	-
09/04/08	Coes Ford Downstream	1.30	-	-	6.84	0.92	1300	3475
02/04/08	Coes Ford Downstream	3.40	-	-	10.68	2.73	429	88
19/03/08	Coes Ford Downstream	4.00	-	-	1.76	23.20	2413	56
12/03/08	Coes Ford Downstream	4.00	-	-	5.70	9.75	2181	138
02/05/07	Coes Ford Downstream	2.70	-	-	1.70	1.95	263	394
04/04/07	Coes Ford Downstream	5.30	-	-	1.50	0.26	569	162
21/03/07	Coes Ford Downstream	2.30	-	-	2.10	0.95	386	260
07/03/07	Coes Ford Downstream	4.40	-	-	1.30	0.66	538	144
16/02/07	Coes Ford Downstream	-	-	-	-	-	-	-
23/11/06	Coes Ford Downstream	5.4	-	-	-	-	-	-
19/09/06	Coes Ford Downstream	4.5	-	-	-	-	-	-
01/11/05	Coes Ford Downstream	5.3	-	-	6	-	-	-
01/11/05	Coes Ford Downstream	5.1	-	-	2	-	-	-
01/11/05	Coes Ford Downstream	5.5	-	-	6	-	-	-
20/04/05	Coes Ford Downstream	3.10	-	-	2.50	-	575	412
13/04/05	Coes Ford Downstream	3.10	-	-	4.00	11.30	681	775
23/03/05	Coes Ford Downstream	2.90	-	-	16.00	6.50	1844	331
16/03/05	Coes Ford Downstream	4.00	-	-	1.20	-	1981	187
31/03/04	Coes Ford Downstream	4.20	-	-	1.40	2.20	5325	413
29/03/04	Coes Ford Downstream	3.00	-	-	1.10	1.80	481	1456
17/03/04	Coes Ford Downstream	4.10	-	-	1.70	1.20	1800	220
10/03/04	Coes Ford Downstream	4.40	-	-	2.00	2.00	406	650
08/03/04	Coes Ford Downstream	3.00	-	-	1.60	-	938	781
04/03/04	Coes Ford Downstream	4.40	-	-	-	1.33	938	127
27/08/03	Coes Ford Downstream	4.40	12.0	-	0.80	-	5000	133
22/07/03	Coes Ford Downstream	2.00	3.0	-	4.00	-	988	31
14/08/02	Coes Ford Downstream	4.50	8.0	0.17	2.30	1460.00	770	557
17/07/02	Coes Ford Downstream	4.60	8.0	0.58	4.50	188.00	1114	803
01/05/02	Coes Ford Downstream	3.6	-	-	6	-	-	-
26/09/01	Coes Ford Downstream	4.80	-	-	1.30	-	1590	120
13/08/01	Coes Ford Downstream	3.40	-	-	2.80	-	716	423
25/07/01	Coes Ford Downstream	4.00	-	-	2.10	-	1886	163
05/03/01	Coes Ford Downstream	2.1	-	-	-	-	-	-
19/02/01	Coes Ford Downstream	2.5	-	-	1	-	-	-
08/05/00	Coes Ford Downstream	1.6	-	-	17	-	-	-
04/05/11	Coes Ford Upstream	5.40	-	-	9.00	0.06	-	-
13/04/11	Coes Ford Upstream	2.50	-	-	3.00	1.4	-	-
06/04/11	Coes Ford Upstream	4.30	-	-	1.00	0.4	-	-
21/04/10	Coes Ford Upstream	2.12	-	-	-	0.00	1650	750
24/03/10	Coes Ford Upstream	2.00	-	-	1.14	0.40	1050	50
17/03/10	Coes Ford Upstream	2.08	-	-	12.15	0.00	1038	450
10/03/10	Coes Ford Upstream	2.00	-	-	2.19	0.55	1013	731
09/04/08	Coes Ford Upstream	2.70	-	-	13.88	0.15	1744	306
02/04/08	Coes Ford Upstream	2.40	-	-	2.42	5.68	187	50
19/03/08	Coes Ford Upstream	2.50	-	-	15.80	0.00	675	262
12/03/08	Coes Ford Upstream	4.30	-	-	3.50	3.79	6172	9
02/05/07	Coes Ford Upstream	3.10	-	-	0.90	0.05	81	94
04/04/07	Coes Ford Upstream	4.50	-	-	1.40	0.10	244	62
21/03/07	Coes Ford Upstream	2.80	-	-	1.60	0.75	69	0
07/03/07	Coes Ford Upstream	4.90	-	-	0.50	0.00	1925	1231
12/04/06	Coes Ford Upstream	2.80	-	-	5.90	1.10	100	700
05/04/06	Coes Ford Upstream	3.20	-	-	1.80	3.60	8667	2400
15/03/06	Coes Ford Upstream	2.80	-	-	69.00	2.30	9867	4067
08/03/06	Coes Ford Upstream	2.40	-	-	4.40	4.50	18533	1100
20/04/05	Coes Ford Upstream	3.60	-	-	1.00	-	581	62
13/04/05	Coes Ford Upstream	2.90	-	-	13.00	-	569	50
23/03/05	Coes Ford Upstream	3.10	-	-	5.30	0.30	537	153
16/03/05	Coes Ford Upstream	4.50	-	-	1.10	-	1125	262

31/03/04	Coes Ford Upstream	4.60	-	-	0.50	1.30	5838	88
29/03/04	Coes Ford Upstream	4.10	-	-	0.20	2.50	1355	60
17/03/04	Coes Ford Upstream	4.70	-	-	0.40	0.50	2000	280
10/03/04	Coes Ford Upstream	4.90	-	-	0.80	1.70	338	163
08/03/04	Coes Ford Upstream	4.30	-	-	1.80	-	1538	75
04/03/04	Coes Ford Upstream	4.80	-	-	-	0.92	1781	47
27/08/03	Coes Ford Upstream	3.90	13.0	-	0.60	-	16500	200
22/07/03	Coes Ford Upstream	1.70	2.0	-	2.00	-	1050	25
14/08/02	Coes Ford Upstream	4.20	7.0	0.11	0.80	900.00	278	163
17/07/02	Coes Ford Upstream	4.00	5.0	0.00	0.05	98.00	262	81
13/08/01	Coes Ford Upstream	3.50	-	-	2.60	-	443	4
25/07/01	Coes Ford Upstream	4.30	-	-	1.30	-	502	44
09/04/03	D/sMoirs Lane	-	-	-	-	-	-	-
02/04/03	D/sMoirs Lane	3.30	-	-	3.00	-	1840	3120
26/02/03	D/sMoirs Lane	3.30	-	-	2.50	-	267	880
26/02/03	D/sMoirs Lane	3.30	-	-	-	-	-	-
19/02/03	D/sMoirs Lane	2.90	-	-	1.30	-	-	-
27/03/02	D/sMoirs Lane	0.12	-	-	4.00	-	-	2075
20/03/02	D/sMoirs Lane	2.90	-	-	4.70	4.00	-	-
06/03/02	D/sMoirs Lane	2.50	-	-	3.50	5.00	-	619
20/02/02	D/sMoirs Lane	2.80	-	-	5.00	60.00	-	-
05/04/01	D/sMoirs Lane	3.20	-	-	2.34	4.70	-	338
06/03/01	D/sMoirs Lane	3.20	-	-	5.00	9.00	-	350
28/08/00	D/sMoirs Lane	3.30	2.0	-	2.80	1.75	15500	1400
22/04/99	D/sMoirs Lane	3.20	-	-	<15	8.90	690	-
16/03/99	D/sMoirs Lane	3.30	-	-	<15	7.60	110	-
13/05/98	D/sMoirs Lane	3.70	-	-	550.00	8.50	5206	-
05/05/98	D/sMoirs Lane	3.30	-	-	<15	10.20	1778	-
28/04/98	D/sMoirs Lane	3.70	-	-	<15	7.00	2760	-
01/04/98	D/sMoirs Lane	2.70	-	-	<15	10.30	175	-
31/03/98	D/sMoirs Lane	4.10	-	-	<15	26.00	172	-
24/03/98	D/sMoirs Lane	4.20	-	-	<15	16.00	141	-
06/05/97	D/sMoirs Lane	4.00	-	-	<15	0.22	260	-
29/04/97	D/sMoirs Lane	6.25	-	-	<15	1.80	455	-
10/04/97	D/sMoirs Lane	5.60	-	-	<15	3.40	380	-
18/03/97	D/sMoirs Lane	5.75	-	-	<15	0.70	600	-
05/09/96	D/sMoirs Lane	5.90	-	-	<15	2.00	-	540
15/08/96	D/sMoirs Lane	4.00	-	-	<15	2.00	-	910
13/09/95	D/sMoirs Lane	3.30	-	-	-	2.00	600	-
23/08/95	D/sMoirs Lane	26.40	-	-	-	2.00	270	-
26/04/94	D/sMoirs Lane	6.02	-	-	-	-	-	-
10/08/10	Harts Creek 1	2.40	-	-	73.36	-	12267	9933
27/07/10	Harts Creek 1	2.20	-	-	6.43	-	533	183
13/07/10	Harts Creek 1	3.20	-	-	6.41	-	700	250
22/06/10	Harts Creek 1	2.90	-	-	5.45	-	1567	433
08/06/10	Harts Creek 1	3.60	-	-	17.86	-	3467	1717
25/05/10	Harts Creek 1	2.30	-	-	4.16	-	233	733
11/05/10	Harts Creek 1	2.80	-	-	40.58	-	983	1450
27/04/10	Harts Creek 1	3.10	-	-	2.12	-	483	383
13/04/10	Harts Creek 1	3.30	-	-	3.96	-	340	620
30/03/10	Harts Creek 1	2.20	-	-	12.31	-	464	373
08/04/09	Harts Creek 1	5.40	-	-	1.12	1.55	388	1256
27/03/09	Harts Creek 1	5.50	-	-	5.00	-	-	-
25/03/09	Harts Creek 1	5.10	-	-	1.61	1.71	388	443
23/03/09	Harts Creek 1	5.50	-	-	3.00	-	-	-
18/03/09	Harts Creek 1	4.80	-	-	3.00	0.98	266	300
11/03/09	Harts Creek 1	4.10	-	-	2.66	1.67	507	335
23/02/09	Harts Creek 1	2.30	-	-	7.00	-	-	-
10/08/10	Harts Creek 2	2.80	-	-	72.04	-	12467	10667
27/07/10	Harts Creek 2	4.90	-	-	4.95	-	617	150
13/07/10	Harts Creek 2	3.40	-	-	6.43	-	683	333
22/06/10	Harts Creek 2	3.10	-	-	8.24	-	1667	400

08/06/10	Harts Creek 2	3.80	-	-	17.82	-	3100	1233
25/05/10	Harts Creek 2	2.20	-	-	3.89	-	800	600
11/05/10	Harts Creek 2	3.10	-	-	38.40	-	3833	917
27/04/10	Harts Creek 2	3.00	-	-	2.90	-	283	233
13/04/10	Harts Creek 2	3.30	-	-	1.82	-	680	460
30/03/10	Harts Creek 2	3.00	-	-	3.50	-	582	455
10/08/10	Harts Creek 3	4.60	-	-	19.39	-	8000	1133
27/07/10	Harts Creek 3	4.10	-	-	1.06	-	3250	100
13/07/10	Harts Creek 3	4.20	-	-	0.69	-	417	183
22/06/10	Harts Creek 3	4.20	-	-	4.05	-	2100	500
08/06/10	Harts Creek 3	4.00	-	-	12.61	-	3750	5283
25/05/10	Harts Creek 3	4.10	-	-	5.63	-	167	117
11/05/10	Harts Creek 3	4.50	-	-	44.41	-	317	183
27/04/10	Harts Creek 3	4.70	-	-	1.65	-	250	250
13/04/10	Harts Creek 3	2.80	-	-	0.97	-	220	140
30/03/10	Harts Creek 3	3.20	-	-	4.54	-	491	264
10/08/10	Harts Creek 4	4.00	-	-	22.72	-	8200	2000
27/07/10	Harts Creek 4	3.20	-	-	1.90	-	2417	167
13/07/10	Harts Creek 4	4.50	-	-	0.84	-	300	333
22/06/10	Harts Creek 4	3.50	-	-	3.72	-	1100	500
08/06/10	Harts Creek 4	3.80	-	-	10.89	-	2883	5367
25/05/10	Harts Creek 4	3.30	-	-	2.42	-	317	233
11/05/10	Harts Creek 4	5.00	-	-	42.60	-	583	117
27/04/10	Harts Creek 4	4.50	-	-	1.92	-	450	167
13/04/10	Harts Creek 4	3.00	-	-	3.67	-	460	100
30/03/10	Harts Creek 4	3.80	-	-	3.38	-	382	282
12/03/10	Kaituna River 1	1.20	-	-	7.00	-	-	-
10/03/10	Kaituna River 1	0.90	-	-	10.00	-	-	-
03/03/10	Kaituna River 1	0.30	-	-	5.00	-	-	-
26/02/10	Kaituna River 1	1.10	-	-	2.00	-	-	-
24/02/10	Kaituna River 1	1.50	-	-	4.00	-	-	-
19/02/10	Kaituna River 1	1.30	-	-	16.00	-	-	-
17/02/10	Kaituna River 1	1.00	-	-	3.00	-	-	-
25/03/09	Kaituna River 1	0.20	-	-	0.00	-	-	-
25/03/09	Kaituna River 1	0.40	-	-	8.00	-	-	-
20/03/09	Kaituna River 1	0.10	-	-	0.00	-	-	-
20/03/09	Kaituna River 1	0.10	-	-	2.00	-	-	-
18/03/09	Kaituna River 1	0.20	-	-	6.00	-	-	-
18/03/09	Kaituna River 1	0.20	-	-	1.00	-	-	-
13/03/09	Kaituna River 1	0.30	-	-	0.00	-	-	-
13/03/09	Kaituna River 1	0.30	-	-	3.00	-	-	-
06/03/09	Kaituna River 1	0.20	-	-	3.00	-	-	-
06/03/09	Kaituna River 1	0.30	-	-	2.00	-	-	-
04/03/09	Kaituna River 1	0.10	-	-	11.00	-	-	-
04/03/09	Kaituna River 1	0.00	-	-	11.00	-	-	-
27/02/09	Kaituna River 1	0.40	-	-	6.00	-	-	-
27/02/09	Kaituna River 1	0.30	-	-	11.00	-	-	-
25/02/09	Kaituna River 1	0.00	-	-	40.00	-	-	-
18/02/09	Kaituna River 1	0.30	-	-	0.00	-	-	-
18/02/09	Kaituna River 1	0.00	-	-	0.00	-	-	-
02/04/08	Kaituna River 1	0.20	-	-	7.00	-	-	-
02/04/08	Kaituna River 1	0.10	-	-	14.00	-	-	-
28/03/08	Kaituna River 1	0.70	-	-	0.00	-	-	-
20/03/08	Kaituna River 1	0.80	-	-	1.00	-	-	-
14/03/08	Kaituna River 1	0.40	-	-	5.00	-	-	-
14/03/08	Kaituna River 1	0.40	-	-	2.00	-	-	-
12/03/08	Kaituna River 1	0.20	-	-	0.00	-	-	-
12/03/08	Kaituna River 1	0.20	-	-	6.00	-	-	-
05/03/08	Kaituna River 1	0.30	-	-	0.00	-	-	-
05/03/08	Kaituna River 1	0.20	-	-	0.00	-	-	-
27/02/08	Kaituna River 1	1.10	-	-	1.00	-	-	-
27/02/08	Kaituna River 1	0.90	-	-	0.00	-	-	-

27/02/08	Kaituna River 1	0.90	-	-	0.00	-	-	-	-
27/02/08	Kaituna River 1	0.70	-	-	0.00	-	-	-	-
20/02/08	Kaituna River 1	0.50	-	-	0.00	-	-	-	-
20/02/08	Kaituna River 1	0.90	-	-	1.00	-	-	-	-
20/02/08	Kaituna River 1	0.70	-	-	0.00	-	-	-	-
30/03/07	Kaituna River 1	0.30	-	-	5.00	-	-	-	-
28/03/07	Kaituna River 1	0.20	-	-	5.00	-	-	-	-
28/03/07	Kaituna River 1	0.40	-	-	5.00	-	-	-	-
23/03/07	Kaituna River 1	0.30	-	-	0.00	-	-	-	-
23/03/07	Kaituna River 1	0.30	-	-	0.00	-	-	-	-
21/03/07	Kaituna River 1	0.20	-	-	0.00	-	-	-	-
21/03/07	Kaituna River 1	0.20	-	-	4.00	-	-	-	-
16/03/07	Kaituna River 1	0.50	-	-	2.00	-	-	-	-
09/03/07	Kaituna River 1	0.20	-	-	0.00	-	-	-	-
09/03/07	Kaituna River 1	0.20	-	-	0.00	-	-	-	-
02/03/07	Kaituna River 1	0.70	-	-	0.00	-	-	-	-
28/02/07	Kaituna River 1	0.10	-	-	0.00	-	-	-	-
28/02/07	Kaituna River 1	0.20	-	-	1.00	-	-	-	-
21/02/07	Kaituna River 1	0.30	-	-	4.00	-	-	-	-
21/02/07	Kaituna River 1	0.15	-	-	1.00	-	-	-	-
21/02/07	Kaituna River 1	0.20	-	-	5.00	-	-	-	-
21/02/07	Kaituna River 1	0.40	-	-	2.00	-	-	-	-
31/03/06	Kaituna River 1	0.30	-	-	-	-	-	-	-
31/03/06	Kaituna River 1	0.30	-	-	-	-	-	-	-
24/03/06	Kaituna River 1	0.10	-	-	-	-	-	-	-
24/03/06	Kaituna River 1	0.10	-	-	-	-	-	-	-
22/03/06	Kaituna River 1	0.20	-	-	3.00	-	-	-	-
22/03/06	Kaituna River 1	0.10	-	-	13.00	-	-	-	-
17/03/06	Kaituna River 1	0.20	-	-	5.00	-	-	-	-
15/03/06	Kaituna River 1	0.20	-	-	4.00	-	-	-	-
15/03/06	Kaituna River 1	-	-	-	-	-	-	-	-
10/03/06	Kaituna River 1	0.20	-	-	5.00	-	-	-	-
10/03/06	Kaituna River 1	0.20	-	-	4.00	-	-	-	-
03/03/06	Kaituna River 1	0.30	-	-	3.00	-	-	-	-
03/03/06	Kaituna River 1	0.20	-	-	-	-	-	-	-
01/03/06	Kaituna River 1	0.30	-	-	8.00	-	-	-	-
01/03/06	Kaituna River 1	0.30	-	-	13.00	-	-	-	-
24/02/06	Kaituna River 1	0.30	-	-	2.00	-	-	-	-
24/02/06	Kaituna River 1	0.20	-	-	-	-	-	-	-
22/02/06	Kaituna River 1	0.20	-	-	5.00	-	-	-	-
22/02/06	Kaituna River 1	0.20	-	-	3.00	-	-	-	-
03/02/06	Kaituna River 2	0.20	-	-	1.00	-	-	-	-
05/03/03	Kaituna River 2	0.20	-	-	-	-	-	-	-
12/08/98	Knights Stream	6.50	27.00	-	4.50	-	-	50	350
05/05/98	Knights Stream	4.80	30.4	-	15.10	8.30	-	-	-
03/09/97	Knights Stream	8.90	5.0	-	<15	3.00	-	122	40
16/08/10	Liffey StreamD/s	5.70	8.3	0.21	6.06	-	-	125	127
03/08/10	Liffey StreamD/s	3.40	6.9	-	5.03	-	-	244	194
21/07/10	Liffey Stream D/s	2.20	4.9	0.40	3.31	-	-	327	50
06/10/11	Liffey Stream Lincoln	3.10	-	-	0.14	-	-	413	72
11/05/11	Liffey Stream Lincoln	5.10	-	-	0.00	-	-	138	13
03/05/10	Liffey Stream Lincoln	4.90	-	-	7.89	-	-	3281	24
06/09/09	Liffey Stream Lincoln	2.90	-	-	-	-	-	-	-
04/04/09	Liffey Stream Lincoln	7.00	-	-	2.98	-	-	-	-
13/11/08	Liffey Stream Lincoln	2.00	-	-	2.00	-	-	1400	885
13/11/08	Liffey Stream Lincoln	2.00	-	-	2.00	-	-	-	-
22/04/08	Liffey Stream Lincoln	1.00	-	-	12.00	-	-	1400	885
22/04/08	Liffey Stream Lincoln	1.00	-	-	12.00	-	-	-	-
09/10/07	Liffey Stream Lincoln	1.00	-	-	17.00	-	-	-	-
07/08/07	Liffey Stream Lincoln	2.10	-	-	5.40	-	-	284	157
07/08/07	Liffey Stream Lincoln	2.10	-	-	5.00	-	-	-	-
02/08/11	Liffey Stream Upstream	5.00	5.5	0.03	2.60	-	-	176	229

20/07/11	Liffey Stream Upstream	2.30	12.0	0.01	4.36	-	110	351
16/08/10	LII D/sLiffey	3.50	6.8	0.22	11.24	-	731	227
03/08/10	LII D/sMoirs	3.70	7.1	-	6.45	-	427	256
21/07/10	LII D/sMoirs	2.00	6.9	0.30	6.69	-	318	275
12/04/00	LII D/sMoirs	3.20	-	-	22.00	-	6560	-
10/04/00	LII D/sMoirs	4.50	-	-	-	75.00	3113	-
29/03/00	LII D/sMoirs	3.80	-	-	-	3600.00	-	290
17/03/00	LII D/sMoirs	3.60	-	-	43.00	87.50	1553	-
15/03/00	LII D/sMoirs	3.80	-	-	15.00	-	5400	-
06/03/00	LII D/sMoirs	4.20	-	-	-	1328.00	-	670
06/05/97	LII D/sMoirs	6.25	-	-	<15	13.50	470	-
29/04/97	LII D/sMoirs	7.00	-	-	<15	8.40	635	-
10/04/97	LII D/sMoirs	7.20	-	-	<15	5.00	503	-
18/03/97	LII D/sMoirs	6.75	-	-	<15	0.80	1280	-
05/09/96	LII D/sMoirs	8.00	-	-	<15	2.00	-	547
15/08/96	LII D/sMoirs	7.50	-	-	<15	4.40	-	573
13/09/95	LII D/sMoirs	3.70	-	-	-	3.20	340	-
23/08/95	LII D/sMoirs	26.40	-	-	-	4.00	380	-
26/04/94	LII D/sMoirs	5.25	-	-	-	-	-	-
25/08/93	LII D/sMoirs	-	-	-	-	0.90	-	-
17/08/93	LII D/sMoirs	-	-	-	-	0.10	110	-
10/08/93	LII D/sMoirs	-	-	-	-	1.30	148	-
03/08/93	LII D/sMoirs	-	-	-	-	-	7	-
27/07/93	LII D/sMoirs	-	-	-	-	-	0	-
20/07/93	LII D/sMoirs	-	-	-	-	0.90	146	-
06/08/07	LII D/sSprings Creek	1.70	4.0	0.02	5.40	-	147	247
24/07/07	LII D/sSprings Creek	5.10	4.2	0.01	4.50	-	40	160
11/07/07	LII D/sSprings Creek	4.50	5.5	-	7.10	-	164	255
07/08/06	LII D/sSprings Creek	-	-	0.20	92.00	-	3721	5588
25/07/06	LII D/sSprings Creek	1.80	-	0.02	11.00	-	1269	181
31/08/05	LII Spring	2.60	5.4	0.02	4.10	-	8000	11000
29/08/05	LII Spring	3.40	4.0	0.04	0.90	-	480000	300000
08/08/05	LII Spring	2.30	3.6	0.01	1.10	-	450	500
13/07/05	LII Spring	3.00	3.0	-	-	-	500	120
15/09/04	LII Spring	2.00	2.0	0.06	2.10	-	-	-
09/08/04	LII Spring	1.90	3.6	0.01	0.70	-	-	-
27/07/04	LII Spring	4.20	7.8	0.09	0.90	-	-	-
14/07/04	LII Spring	2.30	2.7	-	1.80	-	-	-
21/08/03	LII Spring	3.40	3.0	-	3.50	-	113	81
22/07/03	LII Spring	2.50	1.0	-	1.00	-	1519	188
27/03/02	LII Spring	0.13	-	-	0.60	10.00	-	2031
20/03/02	LII Spring	2.70	-	-	0.60	1.00	-	-
06/03/02	LII Spring	3.10	-	-	0.40	6.00	-	163
06/03/02	LII Spring	2.80	3.0	-	1.38	-	-	-
27/02/02	LII Spring	2.78	3.0	-	1.38	-	-	-
20/02/02	LII Spring	2.60	-	-	1.90	-	-	-
12/04/00	LII Spring	3.50	-	-	15.00	-	4180	-
10/04/00	LII Spring	3.20	-	-	-	6.00	819	-
29/03/00	LII Spring	4.10	-	-	-	1130.00	-	183
17/03/00	LII Spring	4.70	-	-	-	13.30	775	-
15/03/00	LII Spring	4.90	-	-	15.00	-	1560	-
06/03/00	LII Spring	3.00	-	-	-	122.00	-	485
06/08/07	LII U/sSprings Creek	3.10	6.9	0.01	4.00	-	80	187
24/07/07	LII U/sSprings Creek	7.00	5.8	0.08	5.00	-	53	167
11/07/07	LII U/sSprings Creek	4.00	6.4	-	5.20	-	145	245
07/08/06	LII U/sSprings Creek	-	-	0.26	38.50	-	3733	2691
25/07/06	LII U/sSprings Creek	3.10	-	0.03	7.00	-	1394	100
25/08/93	LII U/sSprings Creek	-	-	-	-	1.50	-	-
17/08/93	LII U/sSprings Creek	-	-	-	-	0.50	126	-
10/08/93	LII U/sSprings Creek	-	-	-	-	3.10	35	-
03/08/93	LII U/sSprings Creek	-	-	-	-	1.60	5	-
27/07/93	LII U/sSprings Creek	-	-	-	-	0.80	2	-

20/07/93	LII U/sSprings Creek	-	-	-	-	0.40	24	-	-
17/08/09	Lower Halswell River	1.30	1.3	0.31	9.73	-	1036	306	-
04/08/09	Lower Halswell River	3.10	4.8	0.04	4.32	-	548	182	-
22/07/09	Lower Halswell River	2.40	3.8	0.40	4.65	-	1081	82	-
02/08/11	McDonald Road Bridge	3.80	12.0	0.00	8.69	-	80	100	-
20/07/11	McDonald Road Bridge	2.70	7.0	0.01	17.07	-	285	103	-
31/08/05	McDonald Road Bridge	2.30	3.0	-	4.00	-	15000	2000	-
29/08/05	McDonald Road Bridge	2.90	4.0	-	2.40	-	880000	180000	-
08/08/05	McDonald Road Bridge	2.10	3.0	-	5.60	-	300	100	-
13/07/05	McDonald Road Bridge	2.60	4.1	-	8.00	-	1000	200	-
15/09/04	McDonald Road Bridge	2.20	2.6	0.06	3.30	-	-	-	-
09/08/04	McDonald Road Bridge	1.20	3.9	0.21	4.50	-	-	-	-
27/07/04	McDonald Road Bridge	4.60	6.9	0.06	2.60	-	-	-	-
14/07/04	McDonald Road Bridge	3.00	1.9	-	6.40	-	-	-	-
01/05/04	McDonald Road Bridge	5.00	-	-	9	-	-	-	-
21/08/03	McDonald Road Bridge	3.00	3.0	-	6.70	-	413	263	-
22/07/03	McDonald Road Bridge	1.30	2.0	-	6.00	-	919	207	-
09/04/03	McDonald Road Bridge	3.10	6.0	0.00	5.20	-	7466	378	-
15/10/94	McDonald Road Bridge	21.78	-	-	-	2.00	-	88	-
12/10/94	McDonald Road Bridge	3.20	-	-	2.00	2.60	833	-	-
29/09/94	McDonald Road Bridge	1.80	-	-	-	4.10	-	450	-
28/09/94	McDonald Road Bridge	18.00	-	-	-	10.00	210	-	-
22/09/94	McDonald Road Bridge	14.52	-	-	-	7.25	-	343	-
21/09/94	McDonald Road Bridge	3.00	-	-	-	0.00	136	-	-
14/09/94	McDonald Road Bridge	3.80	-	-	3.00	1.60	1020	-	-
13/09/94	McDonald Road Bridge	17.60	-	-	-	120.00	337	-	-
08/09/94	McDonald Road Bridge	3.50	-	-	-	2.40	-	200	-
31/08/94	McDonald Road Bridge	3.50	-	-	-	0.20	120	-	-
30/08/94	McDonald Road Bridge	19.00	-	-	-	30.00	187	-	-
18/08/94	McDonald Road Bridge	4.50	-	-	-	2.10	-	500	-
18/08/94	McDonald Road Bridge	25.52	-	-	-	1.28	-	242	-
17/08/94	McDonald Road Bridge	5.50	-	-	1.00	3.40	2007	-	-
10/08/94	McDonald Road Bridge	0.50	-	-	-	5.00	140	-	-
26/04/94	McDonald Road Bridge	4.19	-	-	-	-	-	-	-
25/08/93	McDonald Road Bridge	-	-	-	-	1.00	-	-	-
17/08/93	McDonald Road Bridge	-	-	-	-	-	343	-	-
10/08/93	McDonald Road Bridge	-	-	-	-	1.90	23	-	-
03/08/93	McDonald Road Bridge	-	-	-	-	-	7	-	-
27/07/93	McDonald Road Bridge	-	-	-	-	-	197	-	-
20/07/93	McDonald Road Bridge	-	-	-	-	0.20	74	-	-
15/09/04	Moirs Farm Ditch 1	0.04	11.4	0.56	51.60	-	-	-	-
09/08/04	Moirs Farm Ditch 1	4.40	20.2	6.12	26.00	-	-	-	-
27/07/04	Moirs Farm Ditch 1	40.00	17.7	18.00	256.00	-	-	-	-
14/07/04	Moirs Farm Ditch 1	30.00	240.0	-	250.00	-	-	-	-
15/09/04	Moirs Farm Ditch 2	10.00	100.0	171.00	663.00	-	-	-	-
09/08/04	Moirs Farm Ditch 2	20.00	190.0	81.00	400.00	-	-	-	-
27/07/04	Moirs Farm Ditch 2	1200.00	2800.0	885.00	30000.00	-	-	-	-
14/07/04	Moirs Farm Ditch 2	30.00	460.0	0.20	605.00	-	-	-	-
14/08/02	Moirs Farm Ditch 2	20.00	27.0	240.00	247.00	6606.00	11197361	293043	-
17/07/02	Moirs Farm Ditch 2	30.00	48.0	204.00	540.00	3988.00	15286956	142608	-
06/03/02	Moirs Farm Ditch 2	20.00	275.0	-	512.00	-	-	-	-
27/02/02	Moirs Farm Ditch 2	20.00	275.0	-	512.00	-	-	-	-
05/04/01	Moirs Farm Ditch 2	20.00	-	-	278.00	172.00	-	5946	-
06/03/01	Moirs Farm Ditch 2	15.00	-	-	285.00	760.00	-	20909	-
12/04/00	Moirs Farm Ditch 2	5.00	-	-	200.00	-	680000	-	-
10/04/00	Moirs Farm Ditch 2	7.50	-	-	308.00	2280.00	655	-	-
29/03/00	Moirs Farm Ditch 2	5.00	-	-	-	79000.00	-	40000	-
17/03/00	Moirs Farm Ditch 2	3.50	-	-	957.00	2480.00	186	-	-
15/03/00	Moirs Farm Ditch 2	22.50	-	-	250.00	-	512000	-	-
06/03/00	Moirs Farm Ditch 2	7.50	-	-	-	6508.00	-	90000	-
15/09/04	Moirs Farm Ditch 3	3.00	4.0	0.32	16.50	-	-	-	-
09/08/04	Moirs Farm Ditch 3	3.80	10.7	0.43	16.50	-	-	-	-

27/07/04	Moirs Farm Ditch 3	5.40	8.8	0.03	158.00	-	-	-	
14/07/04	Moirs Farm Ditch 3	4.50	5.5	0.10	20.00	-	-	-	
31/08/05	Moirs Farm Ditch 4	0.50	2.1	0.10	5.50	-		34000	34000
29/08/05	Moirs Farm Ditch 4	2.70	3.0	0.01	2.40	-		518000	140000
08/08/05	Moirs Farm Ditch 4	0.92	3.0	0.06	4.00	-		380	200
13/07/05	Moirs Farm Ditch 4	1.30	2.7	-	7.40	-		2000	100
02/08/11	Moirs Lane Bridge	2.30	5.4	0.00	9.19	-		113	277
20/07/11	Moirs Lane Bridge	3.60	26.0	0.01	5.04	-		497	819
16/08/10	Moirs Lane Bridge	3.70	10.1	0.22	3.84	-		662	264
03/08/10	Moirs Lane Bridge	2.30	5.0	-	7.50	-		875	550
21/07/10	Moirs Lane Bridge	2.10	3.8	0.40	3.78	-		373	262
31/08/05	Moirs Lane Bridge	1.00	1.1	-	2.70	-		6000	3000
29/08/05	Moirs Lane Bridge	3.10	3.0	0.01	1.20	-		640000	180000
08/08/05	Moirs Lane Bridge	3.10	4.2	0.01	4.30	-		400	500
13/07/05	Moirs Lane Bridge	3.40	3.6	-	6.00	-		100	500
09/04/03	Moirs Lane Bridge	3.30	5.0	0.00	15.00	-		12600	884
26/02/03	Moirs Lane Bridge	3.10	-	-	-	-	-	-	-
19/02/03	Moirs Lane Bridge	2.60	-	-	10.50	-	-	-	-
14/08/02	Moirs Lane Bridge	3.50	6.0	0.01	2.10	114.00		24509	327
17/07/02	Moirs Lane Bridge	2.80	6.0	0.03	4.50	135.00		3740	918
06/03/02	Moirs Lane Bridge	3.00	4.0	-	4.77	-	-	-	-
27/02/02	Moirs Lane Bridge	2.98	4.0	-	4.77	-	-	-	-
26/09/01	Moirs Lane Bridge	2.90	-	-	2.00	-		16000	653
22/04/99	Moirs Lane Bridge	3.50	-	-	<15	7.10		390	-
16/03/99	Moirs Lane Bridge	3.20	-	-	<15	8.20		197	-
13/05/98	Moirs Lane Bridge	3.40	-	-	550.00	17.40		1310	-
05/05/98	Moirs Lane Bridge	3.30	-	-	<15	26.90		2195	-
28/04/98	Moirs Lane Bridge	4.00	-	-	<15	20.00		3822	-
01/04/98	Moirs Lane Bridge	3.10	-	-	<15	16.50		244	-
31/03/98	Moirs Lane Bridge	3.10	-	-	<15	10.10		260	-
24/03/98	Moirs Lane Bridge	4.00	-	-	<15	18.00		243	-
15/05/07	Nottingham Stream	0.60	-	-	0	-	-	-	-
15/05/07	Nottingham Stream	-	-	-	0	-	-	-	-
15/05/07	Nottingham Stream	1.00	-	-	3	-	-	-	-
15/05/07	Nottingham Stream	-	-	-	12	-	-	-	-
21/08/03	Pannetts Bridge	2.70	2.0	-	2.80	-		800	213
22/07/03	Pannetts Bridge	1.90	1.0	-	1.50	-		1375	81
26/04/94	Pannetts Bridge	3.62	-	-	-	-	-	-	-
08/03/10	Selwyn River Coalgate	0.40	-	-	2	-	-	-	-
23/03/09	Selwyn River Coalgate	0.30	-	-	1	-	-	-	-
29/02/08	Selwyn River Coalgate	0.80	-	-	0	-	-	-	-
10/05/07	Selwyn River Coalgate	0.30	-	-	3	-	-	-	-
10/05/07	Selwyn River Coalgate	0.40	-	-	1	-	-	-	-
10/05/07	Selwyn River Coalgate	0.40	-	-	0	-	-	-	-
09/05/07	Selwyn River Coalgate	0.40	-	-	0	-	-	-	-
09/05/07	Selwyn River Coalgate	0.40	-	-	0	-	-	-	-
09/05/07	Selwyn River Coalgate	0.20	-	-	0	-	-	-	-
09/05/07	Selwyn River Coalgate	0.30	-	-	0	-	-	-	-
10/04/07	Selwyn River Coalgate	0.50	-	-	0	-	-	-	-
23/04/02	Selwyn River Coalgate	0.50	-	-	5	-	-	-	-
23/04/02	Selwyn River Coalgate	0.50	-	-	-	-	-	-	-
08/05/01	Selwyn River Coalgate	0.50	-	-	3	-	-	-	-
03/08/10	Sergeants Rd drain	0.90	3.6	-	11.12	-		2600	831
21/07/10	Sergeants Rd drain	1.70	2.9	0.40	10.00	-		464	69
16/08/10	Sergeants Road Drain	1.10	2.9	0.28	14.92	-		275	200
04/05/11	Silverstream	2.50	-	-	16.00	1.25		-	-
13/04/11	Silverstream	5.80	-	-	17.00	1		-	-
06/04/11	Silverstream	3.90	-	-	8.00	0		-	-
21/04/10	Silverstream	2.30	-	-	1.75	0.00		713	38
24/03/10	Silverstream	2.20	-	-	5.00	0.00		1188	425
17/03/10	Silverstream	2.12	-	-	1.69	-		1362	125
10/03/10	Silverstream	2.16	-	-	1.58	0.80		1950	113

09/04/08	Silverstream		5.00	-	-	2.49	1.85	16231	200
02/04/08	Silverstream		3.60	-	-	4.70	7.75	1606	281
19/03/08	Silverstream		3.50	-	-	2.66	15.80	1118	3556
12/03/08	Silverstream		3.30	-	-	5.60	7.58	1044	44
02/05/07	Silverstream		3.20	-	-	1.30	2.30	256	731
04/04/07	Silverstream		5.20	-	-	2.10	0.12	325	306
21/03/07	Silverstream		3.80	-	-	1.40	0.95	2600	367
07/03/07	Silverstream		5.10	-	-	1.40	2.10	444	275
12/04/06	Silverstream		2.60	-	-	3.30	1.40	33	4100
05/04/06	Silverstream		2.60	-	-	0.90	0.90	9500	1967
15/03/06	Silverstream		2.80	-	-	1.70	7.40	12533	4400
08/03/06	Silverstream		2.50	-	-	0.90	0.70	9533	1233
20/04/05	Silverstream		4.70	-	-	1.80	-	956	737
13/04/05	Silverstream	-		-	-	-	-	-	-
23/03/05	Silverstream		3.10	-	-	-	3.60	1212	500
16/03/05	Silverstream		4.20	-	-	1.60	-	1587	581
31/03/04	Silverstream	-		-	-	-	-	-	-
29/03/04	Silverstream		3.40	-	-	2.30	-	473	3245
17/03/04	Silverstream	-		-	-	-	-	-	-
10/03/04	Silverstream	-		-	-	-	-	-	-
08/03/04	Silverstream		2.70	-	-	2.60	-	1125	919
04/03/04	Silverstream	-		-	-	-	-	-	-
27/08/03	Silverstream		5.60	16.0	-	3.70	-	40000	294
22/07/03	Silverstream		2.00	3.0	-	2.00	-	463	600
14/08/02	Silverstream		6.30	7.0	0.14	3.40	170.00	754	934
17/07/02	Silverstream		4.40	7.0	0.09	7.50	184.00	1213	983
13/08/01	Silverstream		3.20	-	-	4.00	-	1066	906
25/07/01	Silverstream		3.90	-	-	3.90	-	1533	520
06/08/07	Springs Creek		1.50	1.7	0.03	6.00	-	87	200
24/07/07	Springs Creek		2.00	0.0	0.08	3.80	-	73	253
11/07/07	Springs Creek		0.80	1.0	-	7.40	-	173	109
07/08/06	Springs Creek	-		-	0.20	46.00	-	3000	2985
25/07/06	Springs Creek		1.20	-	0.01	10.00	-	1363	94
06/08/07	Springs Creek Spring		1.70	3.0	0.05	2.00	-	120	160
24/07/07	Springs Creek Spring		2.00	0.4	0.09	1.90	-	33	40
11/07/07	Springs Creek Spring		2.10	2.0	-	4.60	-	164	45
07/08/06	Springs Creek Spring	-		-	0.06	9.80	-	788	360
25/07/06	Springs Creek Spring		0.60	-	0.01	4.10	-	681	56
17/08/09	Upper Halswell River		1.90	5.3	0.28	27.92	-	895	350
04/08/09	Upper Halswell River		4.60	5.9	0.10	31.91	-	300	493
22/07/09	Upper Halswell River		3.00	4.1	0.10	32.97	-	363	378
02/04/03	U/sMoirs Lane		3.10	-	-	4.00	-	1080	1367
26/02/03	U/sMoirs Lane		3.40	-	-	2.00	-	307	1333
05/04/01	U/sMoirs Lane		2.90	-	-	2.60	3.60	-	643
06/03/01	U/sMoirs Lane		3.40	-	-	3.00	3.00	-	367
28/08/00	U/sMoirs Lane		3.30	2.0	-	4.60	3.08	4900	400
07/04/04	Waikewai 1		1.90	4.0	0.06	1.40	-	1862	431
01/04/04	Waikewai 1		1.90	4.0	0.01	2.00	-	10154	1308
26/03/04	Waikewai 1		2.60	5.3	0.23	4.50	-	7231	646
19/03/04	Waikewai 1		2.30	-	0.22	-	-	1469	619
07/04/04	Waikewai 2		1.70	3.0	0.15	5.80	-	3154	539
01/04/04	Waikewai 2		1.60	3.0	0.05	3.20	-	14923	139
26/03/04	Waikewai 2		2.80	5.4	0.47	1.90	-	7539	92
19/03/04	Waikewai 2		2.20	-	0.48	-	-	2750	513
07/04/04	Waikewai 3		1.10	3.0	0.05	4.15	-	2339	554
01/04/04	Waikewai 3		1.30	2.0	0.04	2.30	-	6875	288
26/03/04	Waikewai 3		1.90	4.3	0.14	2.30	-	1469	288
19/03/04	Waikewai 3		1.30	-	0.21	-	-	875	2388
07/04/04	Waikewai 4		0.60	2.0	0.14	2.40	-	2615	1462
01/04/04	Waikewai 4	-		-	-	-	-	-	-
26/03/04	Waikewai 4		0.90	3.2	0.20	1.50	-	1125	194
19/03/04	Waikewai 4	-		-	-	-	-	-	-

07/04/04	Waikewai 5	1.10	3.0	0.07	3.80	-	2339	631
01/04/04	Waikewai 5	1.70	1.7	0.05	2.30	-	2500	256
26/03/04	Waikewai 5	2.60	4.5	0.18	1.60	-	1156	269
19/03/04	Waikewai 5	1.60	-	0.15	-	-	2438	2263
06/08/07	X-Drain	2.00	3.1	0.05	3.60	-	93	200
24/07/07	X-Drain	3.80	1.5	0.00	5.40	-	33	187
11/07/07	X-Drain	3.70	3.7	-	6.50	-	191	118
04/05/09	Yarrs Lagoon 1	3.30	-	-	2.97	-	6	3
06/04/09	Yarrs Lagoon 1	4.30	-	-	2.39	-	12	4
26/03/09	Yarrs Lagoon 1	4.10	-	-	1.75	-	5	2
04/05/09	Yarrs Lagoon 2	2.80	-	-	2.00	-	3	3
06/04/09	Yarrs Lagoon 2	5.30	-	-	3.15	-	4	11
26/03/09	Yarrs Lagoon 2	4.40	-	-	2.81	-	2	2
04/05/09	Yarrs Lagoon 3	3.30	-	-	3.21	-	4	2
06/04/09	Yarrs Lagoon 3	5.10	-	-	1.97	-	10	3
26/03/09	Yarrs Lagoon 3	3.20	-	-	3.40	-	7	1
04/05/09	Yarrs Lagoon 4	3.50	-	-	3.63	-	6	2
06/04/09	Yarrs Lagoon 4	3.60	-	-	1.92	-	14	2
26/03/09	Yarrs Lagoon 4	3.20	-	-	4.74	-	8	2
04/05/09	Yarrs Lagoon 5	1.30	-	-	3.00	-	5	1
06/04/09	Yarrs Lagoon 5	1.30	-	-	1.67	-	3	2
26/03/09	Yarrs Lagoon 5	1.00	-	-	1.00	-	9	1

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