

Stratford District Council
Water Supply Schemes
Monitoring Programme
Annual Report
2013-2014

Technical Report 2014-117

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Taranaki Regional Council
Private Bag 713
STRATFORD

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Executive summary

The Stratford District Council (SDC) operates three water supply schemes in the Stratford district, which supply water to the town of Stratford and to the villages of Midhirst and Toko. This report for the period July 2013–June 2014 describes the monitoring programme implemented by the Taranaki Regional Council (the Council) to assess SDC's environmental performance during the period under review, and the results and environmental effects of SDC's activities.

SDC holds 10 resource consents in relation to water supplies, which include a total of 60 conditions setting out the requirements that the consent holder must satisfy. The consent holder holds four consents to allow it to take and use water, three consents to discharge filter backwash, and three consents to construct and maintain in-stream structures.

During the monitoring period, SDC demonstrated an overall good level of environmental performance.

The Council's monitoring programme for the year under review included an inspection of each scheme, a review of abstraction data, collection of a sample of the Stratford Water Treatment Plant's (WTP) backwash and a fish survey undertaken in the Konini Stream.

During the monitoring period the consent holder upgraded its larger plant at Stratford. As a result of the upgrade there was a minor issue in regards to data loss during the change-over from a manual to an automated system. Overall the plant upgrades (at Stratford and also now at Midhirst) are now performing well and transmitting abstraction data to Council databases in real time. It was also found during inspection that the Konini weir fish pass required some maintenance, which was addressed by the consent holder.

During the year, SDC demonstrated a good level of environmental and administrative performance with the resource consents. No incidents were recorded during the monitoring year in relation to SDC's compliance at the WTP.

For reference, in the 2013-2014 year, 60% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 29% demonstrated a good level of environmental performance and compliance with their consents.

This report includes recommendations for the 2014-2015 year, including a recommendation relating to an optional review of consent 1276-3.

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1. Introduction

1.1 Compliance monitoring programme reports and the Resource Management Act 1991

1.1.1 Introduction

This report is the Annual Report for the period July 2013 to June 2014 by the Council describing the monitoring programme associated with resource consents held by Stratford District Council (SDC) for its water supply schemes. SDC operates three public water supplies servicing the Stratford, Midhirst and Toko areas.

This report covers the results and findings of the monitoring programme implemented by the Council in respect of the consents held by SDC that relate to abstractions and discharges of water, and the maintenance of in-stream structures for its water supply plants. This is the 17th Annual Report to be prepared by the Council to cover SDC's water abstractions, discharges and their effects.

1.1.2 Structure of this report

Section 1 of this report is a background section. It sets out general information about compliance monitoring under the RMA and the Council's obligations and general approach to monitoring sites through annual programmes, the resource consents held by SDC in relation to its public water supplies, the nature of the monitoring programme in place for the period under review, and a description of the activities and operations conducted at SDC's water supply plants and associated structures.

Section 2 presents the results of monitoring during the period under review, including scientific and technical data.

Section 3 discusses the results, their interpretations, and their significance for the environment.

Section 4 presents recommendations to be implemented in the 2014-2015 monitoring year.

A glossary of common abbreviations and scientific terms, and a bibliography, are presented at the end of the report.

1.1.3 The Resource Management Act 1991 and monitoring

The *Resource Management Act 1991* (RMA) primarily addresses environmental 'effects' which are defined as positive or adverse, temporary or permanent, past, present or future, or cumulative. Effects may arise in relation to:

- (a) the neighbourhood or the wider community around an activity, and may include cultural and social-economic effects;
- (b) physical effects on the locality, including landscape, amenity and visual effects;
- (c) ecosystems, including effects on plants, animals, or habitats, whether aquatic or terrestrial;
- (d) natural and physical resources having special significance (for example recreational, cultural, or aesthetic);

- (e) risks to the neighbourhood or environment.

In drafting and reviewing conditions on discharge permits, and in implementing monitoring programmes, the Council is recognising the comprehensive meaning of 'effects' inasmuch as is appropriate for each activity. Monitoring programmes are not only based on existing permit conditions, but also on the obligations of the RMA to assess the effects of the exercise of consents. In accordance with section 35 of the RMA, the Council undertakes compliance monitoring for consents and rules in regional plans, and maintains an overview of the performance of resource users and consent holders. Compliance monitoring, including both activity and impact monitoring, enables the Council to continually re-evaluate its approach and that of consent holders to resource management and, ultimately, through the refinement of methods and considered responsible resource utilisation, to move closer to achieving sustainable development of the region's resources.

1.1.4 Evaluation of environmental and administrative performance

Besides discussing the various details of the performance and extent of compliance by the consent holder during the period under review, this report also assigns a rating as to SDC environmental and administrative performance.

Environmental performance is concerned with actual or likely effects on the receiving environment from the activities during the monitoring year. **Administrative performance** is concerned with the consent holder approach to demonstrating consent compliance in site operations and management including the timely provision of information to Council (such as contingency plans and water take data) in accordance with consent conditions.

Events that were beyond the control of the consent holder and unforeseeable (that is a defence under the provisions of the RMA can be established) may be excluded with regard to the performance rating applied. For example loss of data due to a flood destroying deployed field equipment.

The categories used by the Council for this monitoring period, and their interpretation, are as follows:

Environmental Performance

- **High** No or inconsequential (short-term duration, less than minor in severity) breaches of consent or regional plan parameters resulting from the activity; no adverse effects of significance noted or likely in the receiving environment. The Council did not record any verified unauthorised incidents involving significant environmental impacts and was not obliged to issue any abatement notices or infringement notices in relation to such impacts.
- **Good** Likely or actual adverse effects of activities on the receiving environment were negligible or minor at most. There were some such issues noted during monitoring, from self reports, or in response to unauthorised incident reports, but these items were not critical, and follow-up inspections showed they have been dealt with. These minor issues were resolved positively, co-operatively, and quickly. The Council was not obliged to issue any abatement notices or

infringement notices in relation to the minor non-compliant effects; however abatement notices may have been issued to mitigate an identified potential for an environmental effect to occur.

For example:

- High suspended solid values recorded in discharge samples, however the discharge was to land or to receiving waters that were in high flow at the time;
 - Strong odour beyond boundary but no residential properties or other recipient nearby.
- **Improvement required** Likely or actual adverse effects of activities on the receiving environment were more than minor, but not substantial. There were some issues noted during monitoring, from self reports, or in response to unauthorised incident reports. Cumulative adverse effects of a persistent minor non-compliant activity could elevate a minor issue to this level. Abatement notices and infringement notices may have been issued in respect of effects.
 - **Poor** Likely or actual adverse effects of activities on the receiving environment were significant. There were some items noted during monitoring, from self reports, or in response to unauthorised incident reports. Cumulative adverse effects of a persistent moderate non-compliant activity could elevate an 'improvement required' issue to this level. Typically there were grounds for either a prosecution or an infringement notice in respect of effects.

Administrative performance

- **High** The administrative requirements of the resource consents were met, or any failure to do this had trivial consequences and were addressed promptly and co-operatively.
- **Good** Perhaps some administrative requirements of the resource consents were not met at a particular time, however these were addressed without repeated interventions from the Council staff. Alternatively adequate reason was provided for matters such as the no or late provision of information, interpretation of 'best practical option' for avoiding potential effects, etc.
- **Improvement required** Repeated interventions to meet the administrative requirements of the resource consents were made by Council staff. These matters took some time to resolve, or remained unresolved at the end of the period under review. The Council may have issued an abatement notice to attain compliance.
- **Poor** Material failings to meet the administrative requirements of the resource consents. Significant intervention by the Council was required. Typically there were grounds for an infringement notice.

For reference, in the 2013-2014 year, 60% of consent holders in Taranaki monitored through tailored compliance monitoring programmes achieved a high level of environmental performance and compliance with their consents, while another 29% demonstrated a good level of environmental performance and compliance with their consents.

1.2 Process description

1.2.1 Stratford water supply

The municipal water supply is extracted from the Patea River (main supply) and the Konini Stream (auxiliary supply) via weirs on these watercourses. The new Stratford plant uses membrane filtration to remove fine materials from the water. Raw water from the Patea River and Konini Stream passes through a grit trap and then onto the membrane filters. These filters are periodically backwashed and the backwash discharges to a large settling pond. Due to the size of the pond, discharges to the Patea River rarely occur.

1.2.2 Midhirst water supply

The Midhirst community WTP was originally met the needs of the former Midhirst dairy factory. Water is pumped from the Te Popo Stream (through a small filter attached to a flexible hose within the stream), to a settling tank at the treatment plant. The pump is switched off when the Te Popo Stream is in fresh with a high level of suspended silt. After settling the water is filtered and treated with chlorine. Once treated, the water is pumped to a reservoir, which has a probe switch to initiate pumping at the treatment plant when the water level in the reservoir is low. The reservoir is believed to have capacity for five days' water for the Midhirst community. From the reservoir, the treated water returns to the WTP where a booster pump drives it into the Midhirst reticulation system at an acceptable mains pressure. A large storage tank onsite acts as a reservoir for fire fighting.

The filter at the WTP is backwashed once per week using treated water. The filter backwash is discharged to a soak hole next to the WTP. The soak hole is filled with sealing chip and covered with soil and is of sufficient size to hold the backwash discharge.

1.2.3 Toko water supply

The Toko rural water supply was originally the water supply for the former Toko dairy factory.

Water is pumped from a bore to a small shed where it is chlorinated and then filtered. After it has been filtered, the water is pumped to two tanks on a hill above Toko. The tanks have probe switches to initiate pumping when the water levels in the tanks are low. The pumps are operated so as to work gradually for longer periods rather than at high rates for short periods.

The filter is backwashed once per week to a series of two soak holes. The capacity of the soak holes is more than adequate to deal with the volumes of backwash which they receive.

1.3 Resource consents

SDC holds various resource consents for the water supply plants and structures that it operates, including water abstraction permits, discharge permits and land use consents. These consents are listed in Table 1 and summarised below in Figure 1 and sections 1.3.1 to 1.3.3. Copies of all resource consents associated with the Stratford District Council water supply operations are attached to this report as Appendix I.

Table 1 Summary of consents held by SDC in relation to public water supplies

Water Supply Scheme	Consent No	Purpose	Issue Date	Next Review	Expiry
Stratford	0068-3	To discharge up to 140 cubic metres/day of settled filter backwash water from the Stratford municipal WTP via a settling pond into the Patea River	1998	-	2016
	0195-2	To take and use water from the Patea River for Stratford town water supply purposes	1998	-	2016
	1421-2	To take and use water from the Konini Stream a tributary of the Paetahi Stream in the Patea catchment for Stratford town water supply purposes	1998	-	2016
	2452-2	To dam the Konini Stream a tributary of the Paetahi Stream in the Patea catchment for the Stratford town water supply	1998	-	2016
	5353-1	To dam the Patea River for the Stratford town water supply	1998	-	2016
	6549-1	To repair and maintain an existing weir structure in the Konini Stream a tributary of the Paetahi Stream in the Patea catchment	2005	2016	2022
Midhirst	1276-3	To take water from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes	2003	2015	2021
	1331-2	To discharge treated filter backwash water from the Midhirst WTP into the Te Popo Stream in the Waitara catchment via a soak hole	1991	-	2016
Toko	1337-3	To take and use groundwater from a bore in the vicinity of the Toko Stream in the Patea catchment for Toko rural water supply purposes	2005	2016	2020
	6605-1	To discharge treated filter backwash water from the Toko WTP into the Toko Stream in the Patea catchment via soak holes	2005	2016	2020

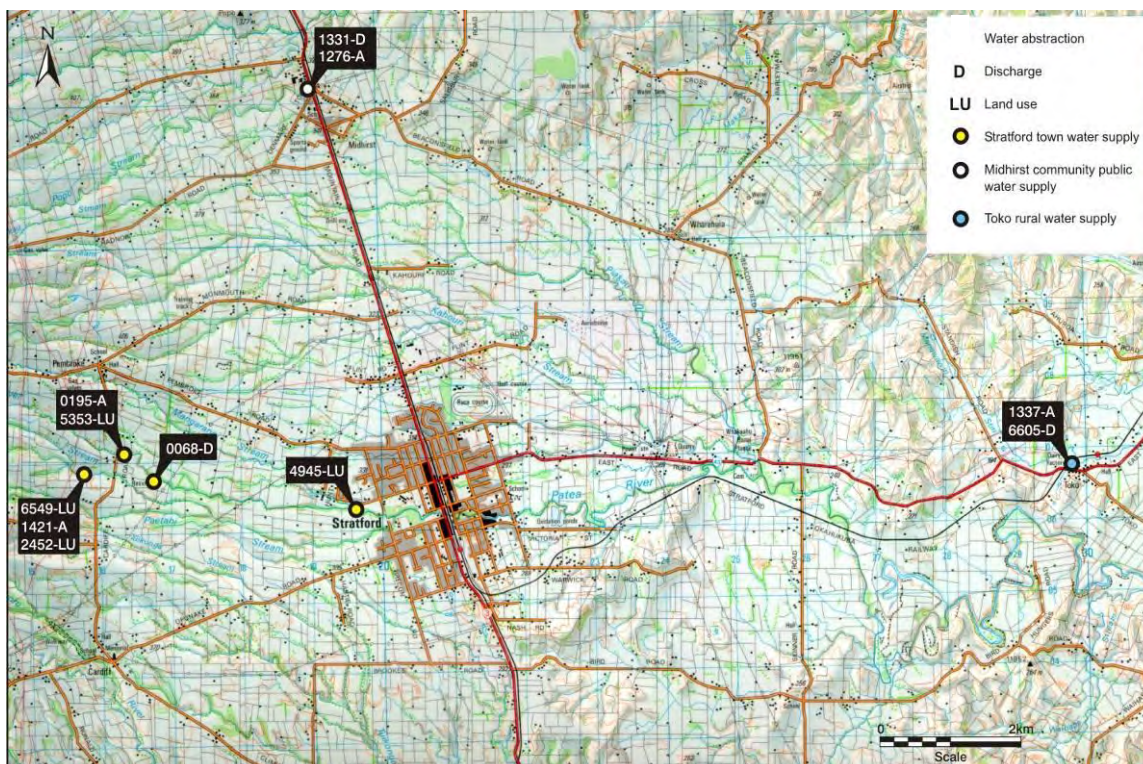


Figure 1 Location of water supply plants and structures in Stratford District

1.3.1 Water abstraction permits

Section 14 of the RMA stipulates that no person may take, use, dam or divert any water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or it falls within some particular categories set out in Section 14.

SDC holds water permit **1276-3** to take water from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes. This permit was issued by the Council on 9 June 2003 under Section 87(d) of the RMA. It is due to expire on 1 June 2015. Changes were made to the consent in May 2011.

Condition 1 requires the consent to be exercised in accordance with the information submitted with the application, while condition 2 requires the adoption of the best practicable option to minimise adverse environmental effects.

Condition 3 places a limit on the rate of the abstraction. Conditions 4 and 5 set out limits for both summer and winter daily abstraction rates, while condition 6 limits the amount of water taken annually.

Condition 7 requires a report on leaks and water efficiency and conservation measures to be submitted annually.

Condition 8 requires that intake structures are screened.

Condition 9 requires the consent holder to install a measuring device and provide abstraction records to Council.

Condition 10 allows the Council to suspend or reduce abstraction at times of low flow and condition 11 is a review provision.

SDC holds water permit **1337-2** to take water from a bore in the vicinity of Toko Stream in the Patea catchment for rural water supply purposes. This permit was renewed on 17 June 2005 under Section 87(d) of the RMA. It is due to expire on 1 June 2022.

Condition 1 requires the adoption of the best practicable option to minimise adverse environmental effects.

Condition 2 requires the consent to be exercised in accordance with the information supplied in support of the application.

Condition 3 requires notification of the Council prior to exercise of the consent.

Condition 4 places limits on the volume and rate of abstraction.

Condition 5 requires the recording of daily abstraction rates and provision of abstraction data to Council.

Condition 6 is a lapse provision.

Condition 7 is a review provision.

SDC holds water permit **0195-2** to take and use water from the Patea River for Stratford town water supply purposes. This permit was issued by the Taranaki Regional Council on 27 July 1998 and was reviewed in August 2004 to clarify abstraction rates. It is due to expire on 1 June 2016.

Condition 1 requires the recording of daily abstraction rates and provision of abstraction data to Council.

Conditions 2, 3 and 4 place limits on the rate of abstraction under various conditions.

Condition 5 requires the implementation of water conservation measures when flow is at or below MALF.

Condition 6 deals with donations to the Taranaki Tree Trust for riparian management.

Condition 7 allows the Council to require the suspension or reduction of the abstraction during times of low flow.

Condition 8 is a review provision.

SDC holds water permit **1421-2** to take and use water from the Konini Stream to supplement the Stratford town water supply. This permit was issued by the Council on 20 July 1998 under Section 87(d) of the RMA and was reviewed in August 2004 to clarify abstraction rates. It is due to expire on 1 June 2016.

Condition 1 requires the recording of daily abstraction rates and provision of abstraction data to Council.

Conditions 2 and 3 place limits on the rate of abstraction under various conditions.

Condition 4 allows the Council to require the suspension or reduction of abstraction during times of low flow.

Condition 5 is a review provision.

1.3.2 Water discharge permit

Section 15(1)(a) of the RMA stipulates that no person may discharge any contaminant into water, unless the activity is expressly allowed for by a resource consent or a rule in a regional plan, or by national regulations.

SDC holds water discharge permit **1331-2** to discharge treated filter backwash water from the Midhirst community public water supply plant into the Te Popo Stream via a soak hole. This permit was issued by the Council on 21 August 1991 under Section 87(e) of the RMA. The conditions were varied in September 2000 when soakholes were installed. Prior to this the backwash was discharged directly to the stream. The consent is due to expire on 1 June 2016.

Condition 1 places a limit on the discharge volume.

Condition 2 requires the proper and efficient maintenance and operation of the soakhole system.

Condition 3 specifies effects which the discharge is prohibited to cause in the receiving waters.

Condition 4 places a limit on chlorine in the discharge.

Condition 5 is a review provision.

SDC holds water discharge permit **0068-3** to discharge settled filter backwash water from the Stratford municipal water treatment plant via a settling pond into the Patea River. This permit was issued by the Council on 24 February 1998 under Section 87(e) of the RMA. It is due to expire on 1 June 2016.

Condition 1 requires the proper and efficient maintenance and operation of the settlement pond system.

Condition 2 requires the relocation of the outlet from the settlement pond to prevent a short-circuit between the inlet and outlet.

Condition 3 specifies effects which the discharge is prohibited to cause in the receiving waters.

Condition 4 limits certain contaminants in the discharge.

Condition 5 is a review provision.

SDC holds water discharge permit **6605-1** to discharge filter backwash water from the Toko water supply plant into the Manawawiri Stream, a tributary of the Toko Stream via soak holes. This permit was issued by the Council on 29 April 2005 under Section 87(e) of the RMA. It is due to expire on 1 June 2022.

Condition 1 places a limit on the discharge volume.

Condition 2 requires the proper and efficient maintenance and operation of the soakhole system.

Condition 3 specifies effects which the discharge is prohibited to cause in the receiving waters.

Condition 4 limits chlorine in the discharge.

Condition 5 is a review provision.

1.3.3 Land use permits

Section 13(1)(a) of the RMA stipulates that no person may in relation to the bed of any lake or river use, erect, reconstruct, place, alter, extend, remove, or demolish any structure or part of any structure in, on, under, or over the bed, unless the activity is expressly allowed for by a resource consent, a rule in a regional plan, or by national regulations.

SDC holds land use consent **2452-2** to dam the Konini Stream in the Patea catchment for the Stratford town water supply. The consent was issued by the Council on 20 July 1998 under Section 87(a) of the RMA. It is due to expire on 1 June 2016.

Condition 1 provides for provision of fish passage.

Condition 2 requires the monitoring of the fish pass.

Condition 3 is a review provision.

SDC holds land use consent **6549-1** to repair and maintain an existing weir structure in the Konini Stream, a tributary of the Paetahi Stream in the Patea catchment. The consent was issued by the Taranaki Regional Council on 21 September 2004 under Section 87(a) of the RMA. It is due to expire on 1 July 2021.

Condition 1 requires notification of Council prior to maintenance works.

Condition 2 prohibits in-stream works between 1 May and 31 October without prior written permission.

Conditions 3 and 4 require the adoption of the best practicable option and minimisation of adverse effects on water quality.

Condition 5 requires the consent to be exercised in accordance with the information submitted with the application.

Condition 6 prohibits erosion of the river channel.

Condition 7 specifies effects which are prohibited in the Konini Stream.

Condition 8 is a review provision.

SDC holds land use consent **5353-1** to dam the Patea River for the Stratford town water supply. This permit was issued by the Council on 20 July 1998 under Section 87(a) of the RMA. The conditions related to fish passage were changed in March 2000 to allow for research and the formulation of a decision concerning trout access to the Patea River above the weir. The consent is due to expire on 1 June 2016.

Condition 1 provides for the provision of fish passage.

Condition 2 requires satisfactory maintenance and operation of the fish pass.

Condition 3 is a review provision.

1.4 Monitoring programme

1.4.1 Introduction

Section 35 of the RMA sets out obligations upon the Council to gather information, monitor, and conduct research on the exercise of resource consents, and the effects arising, within the Taranaki region and report upon these.

The Council may therefore make and record measurements of physical and chemical parameters, take samples for analysis, carry out surveys and inspections, conduct investigations, and seek information from consent holders.

The monitoring programme for SDC's water supplies consisted of five primary components.

1.4.2 Programme liaison and management

There is generally a significant investment of time and resources by the Council in:

- ongoing liaison with resource consent holders over consent conditions and their interpretation and application;
- in discussion over monitoring requirements;
- preparation for any reviews;
- renewals;
- new consents;
- advice on the Council's environmental management strategies and content of regional plans and;
- consultation on associated matters.

1.4.3 Site inspections

The three water supply schemes, and their associated structures, were each visited once during the monitoring period. With regard to consents for the abstraction of or

discharge to water, the main points of interest were plant processes with potential or actual discharges to receiving watercourses, including contaminated stormwater and process wastewaters. Sources of data being collected by the consent holder were identified and accessed, so that performance in respect of operation, internal monitoring, and supervision could be reviewed by the Council.

1.4.4 Chemical sampling

The backwash discharge was sampled once, and the sample analysed for chlorine (total and filtered), pH, suspended solids and turbidity.

1.4.5 Freshwater biological surveys

A fish survey was performed on one occasion in the Konini Stream to assess the performance of the fish pass at the Konini weir. This survey is undertaken on a triennial basis in conjunction with Taranaki Fish and Game.

1.4.6 Data review

All of the water abstraction consents held by the SDC in regard to municipal water supply contain a condition which requires the SDC to keep records of abstraction volumes and make these records available to Council upon request. The data is reviewed to assess compliance in regard to volumes of water taken and flow conditions of the source stream or river.

2. Results

2.1 Inspections

Each of SDC's water supply schemes were inspected on 4 March 2014.

2.1.1 Stratford water supply

The Patea River was running clean and clear, with a low to moderate flow. The abstraction rate was 33.3 L/s, which complied with the low flow consent limit of 41 L/s. The abstraction from the Konini was 7.6 L/s which was also within consent limits. The backwash pond level was below the outlet pipe and no discharge was occurring. The intake weir was free of debris and no issues were noted.

It was found that the Patea intake flow meter now measures the combined flow from the Patea, Konini and recycled back wash after passing through the grit trap. The site owner stated that a new water meter could be installed above the grit trap when the head works are replaced. A new flow meter had also been installed to measure abstractions from the Konini. It was noted that the meter was installed in a confined space that will not be conducive to verification. Both new meters will be inspected by a Council officer, having particular regard to the NES for water metering.

The Konini was running clean and clear. It was noted that there was a significant amount of debris in the fish pass, and the consent holder was asked to remove this. Due to the low flow there was no flow down the fish pass. It was also noted that water was flowing around behind the intake structure and then re-discharging below the weir. This would have been contributing to the lack of flow in the fish pass (but possibly providing alternative passage). The consent holder was asked to remedy this breach to ensure that all water be directed across the weir intake and fish pass. It was noted that consent conditions allow for such maintenance to be undertaken between 1 November and 30 April of any given year. A follow-up inspection found that all necessary works were undertaken.

2.1.2 Midhirst water supply

The Te Popo Stream was running clean and clear at a low to moderate flow. The abstraction rate was 4.64 L/s (which was within consent conditions). It was noted that the water meter was not installed to NES requirements in regards to straight pipe length, and this will have to be changed before 2016. The consent holder was asked to ensure that the meter was reinstalled correctly during the 2014 upgrade.

2.1.3 Toko water supply

No abstraction was occurring at the time of the inspection. No issues were noted



Photo 1 New Stratford WTP

2.2 Results of abstraction and discharge monitoring

A sample of the filter backwash discharge from the Stratford WTP settling pond was collected on 21 May 2014.

Table 2 Sample from backwash pond at Stratford WTP 21 May 2014 (site STW0002034)

Parameter	Unit	Result	Consent 0068-3 limits
Free chlorine	g/m ³	<0.1	0.1
Total chlorine	g/m ³	<0.1	-
pH	pH	8.7	-
Suspended solids	g/m ³	12	20
Turbidity	NTU	2.2	-

The results were in compliance with consent conditions and not likely to have significant effects on water quality in the Patea River in the event of a discharge.

2.3 Results of spawing survey in the Konini Stream

To assess fish pass effectiveness a triennial fish survey (trout) upstream and downstream of the weir as a way was undertaken on 8 July 2014. This survey coincided with the spawning period. A single adult brown trout was seen in the reach between

Cardiff Road and the weir. The weir and fish pass looked in good condition (Photo 1) although water in the downstream end of the pass flowed over a flat concrete slab that might impede the upstream movement of fish at low flows. Nine adult brown trout were seen in a short section upstream of the weir. Seven of these were located between the weir and a log-jam not far upstream. A further two adult brown trout were located in the pool immediately upstream of the log-jam. When disturbed, the trout swam downstream but were unable to move past the log-jam and so had to move back upstream past the surveyor. This suggests that the log-jam was a barrier to trout passage at the existing flows, and that the seven adult trout had moved upstream past the weir but were then unable to surmount the log-jam. This provides reasonable evidence that the fish pass over the weir is effective for adult trout.

The use of large boulders to back-water and raise the water level at the downstream end of the fish pass would ease passage over the concrete slab, but the survey results indicate that trout are able to use the fish pass in its current configuration.

2.4 Abstraction data

All abstraction consents held by SDC require that daily rates of abstraction are recorded and provided to the Council upon request.

2.4.1 Stratford water supply

Under normal operations the combined water abstraction from the Patea River and Konini Stream is not to exceed 61 L/s (or 5720 m³ / day).

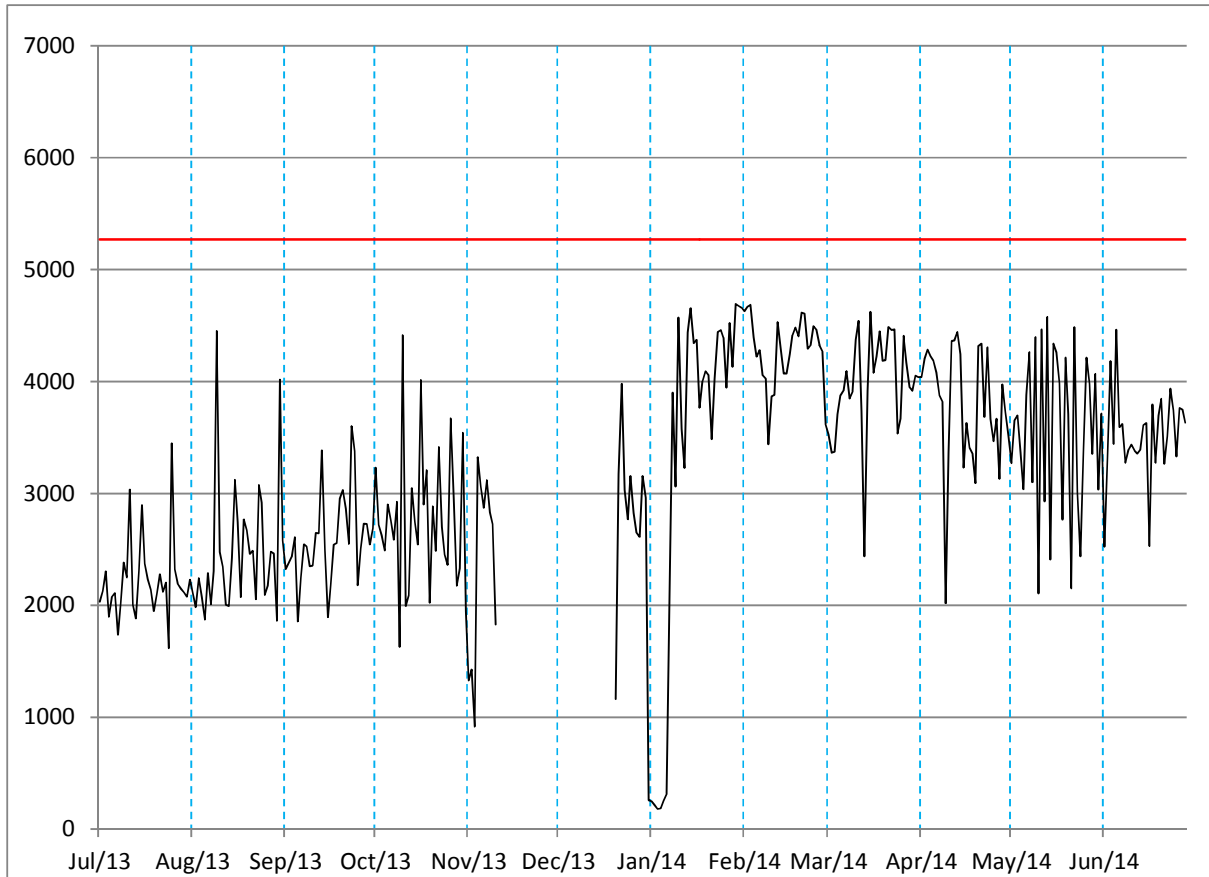


Figure 2 Graph showing the daily combined abstraction from the Patea and Konini River (in m³/day)

It is noted that during the mid-November 2013 to mid-January 2014 there was data loss due to issues in relation to operations at the new plant. Some of this data was recovered but could not be verified. The plant however is now reliably transmitting data to the Council database in real-time.

2.4.2 Toko water supply

The maximum daily abstraction for the Toko WTP is 80 m³/day. Daily abstraction data is shown in Figure 5 and this shows that there were no exceedances during the period under review.

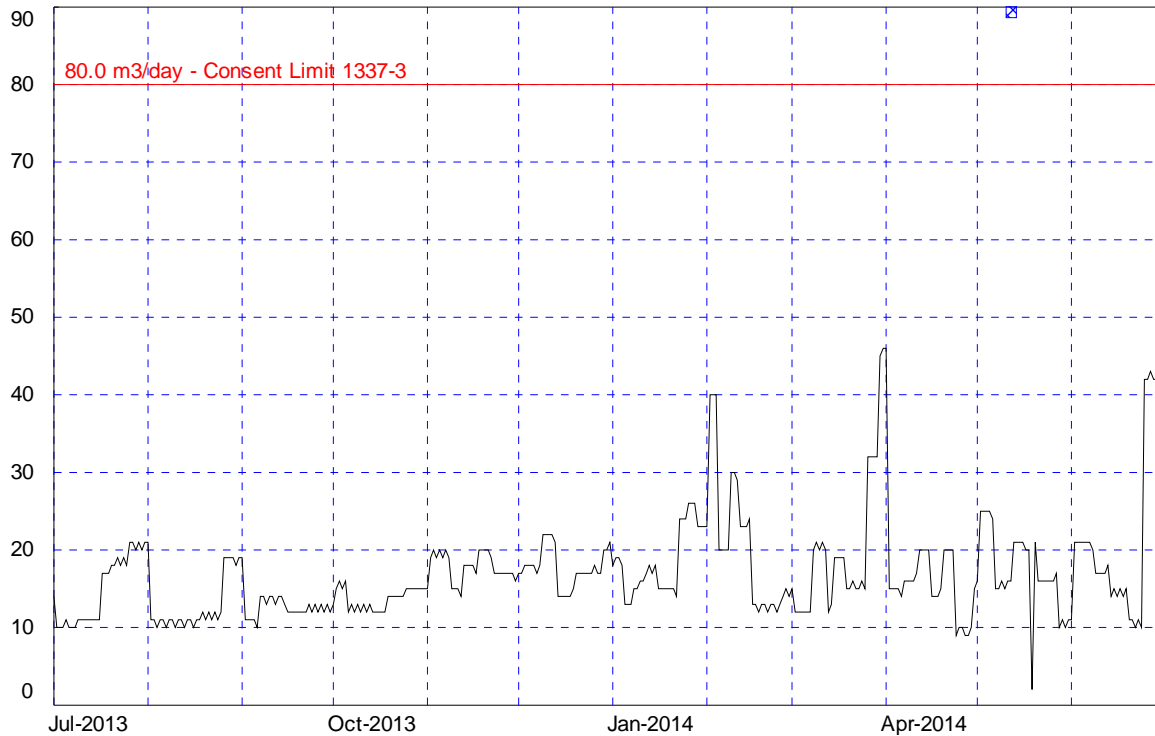


Figure 3 Graph showing the daily abstraction (in cubic metres) at the Toko WTP

2.4.3 Midhirst water supply

Consent 1276-3 allows for a maximum monthly average daily take of 254 m³/day in summer (1 November to 31 March, and an actual take of 432 m³/day in winter (1 April to 31 October). These limits are shown in Figure 4 as a blue line. Abstraction data is given in this figure and shows that there was an exceedance of the monthly average of daily take during January 2014. Due to data processing and resourcing constraints, this exceedance was not detected within the four month enforcement time limit. However an informal investigation showed that the sensor that recorded the level in the reservoir was giving incorrect data causing the reservoir to be run down too far. This resulted in the plant compensating by abstracting for extended periods. Shortly after this exceedance this was addressed and later in the year the plant was completely rebuilt. In this rebuild new sensors were installed and the site is now fully telemetered in real time to Council databases.

During the year the total abstraction was 41,389 m³ which was in compliance with the consent conditions.

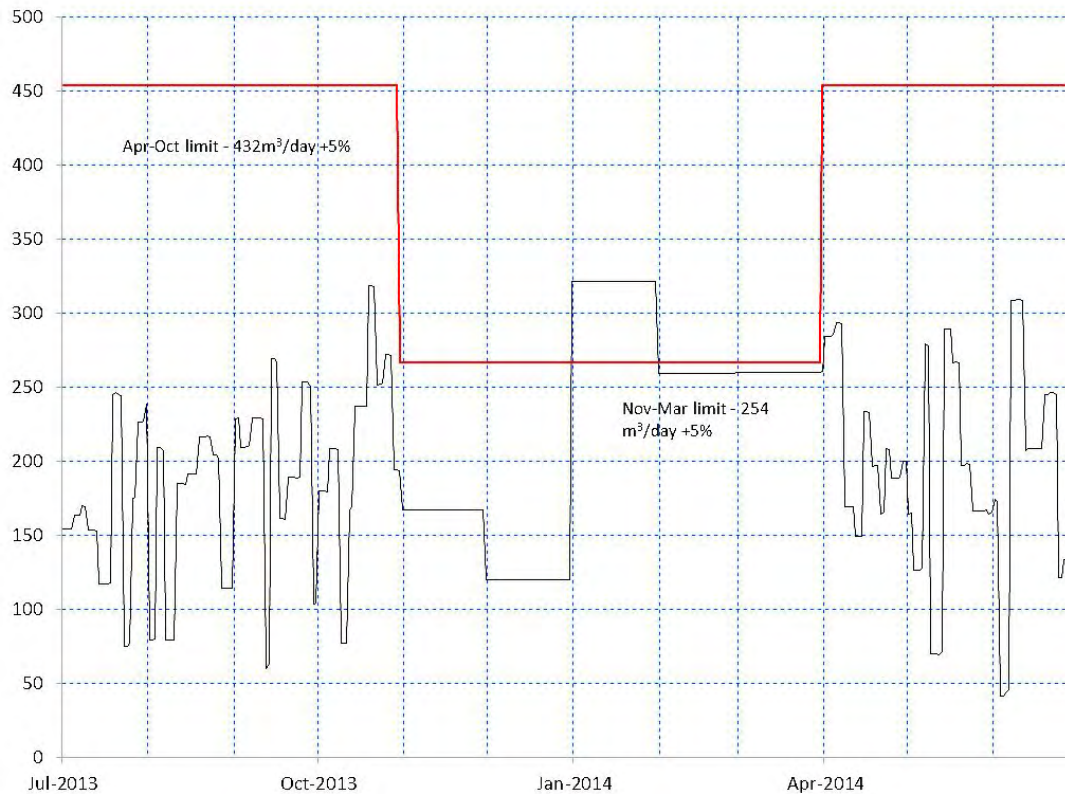


Figure 4 Graph showing the daily/monthly abstraction (in cubic metres) at the Midhirst WTP

2.5 Investigations, interventions, and incidents

The monitoring programme for the year was based on what was considered to be an appropriate level of monitoring, review of data, and liaison with the consent holder. During the year matters may arise which require additional activity by the Council, for example provision of advice and information, or investigation of potential or actual courses of non-compliance or failure to maintain good practices. A pro-active approach that in the first instance avoids issues occurring is favoured.

The Council operates and maintains a register of all complaints or reported and discovered excursions from acceptable limits and practices, including non-compliance with consents, which may damage the environment. The Unauthorised Incident Register (UIR) includes events where the consent holder concerned has itself notified the Council. The register contains details of any investigation and corrective action taken.

Complaints may be alleged to be associated with a particular site. If there is potentially an issue of legal liability, the Council must be able to prove by investigation that the identified company is indeed the source of the incident (or that the allegation cannot be proven).

In the 2013-2014 period, the Council was not required to undertake significant additional investigations and interventions, or record incidents, in association with SDC's conditions in resource consents or provisions in Regional Plans.

3. Discussion

3.1 Discussion of SDC performance

SDC demonstrated a good level of performance in regards to regularly providing abstraction data and complying with consent conditions that specify abstraction volumes. There were some issues at the Midhirst WTP where the plant ran down the water level of the reservoir due to a faulty sensor and this caused over abstraction in the month of January 2014. This however has been rectified and with commissioning of the new plant in 2014. The site is performing well and transmitting data live to the Council database.

The new Stratford plant was also commissioned during the monitoring period and this caused some data loss which made compliance monitoring difficult for short period of time. However as with the Midhirst plant this was rectified once the new plant was commissioned.

3.2 Environmental effects of exercise of consents

The combined abstraction from the Patea River and Konini Stream was below that allowed by the consent. The backwash pond at the Stratford WTP rarely discharges due to the large capacity of the pond. A sample of the pond water indicated that it would not have any significant effects if it were to discharge.

The weir in the Patea River is likely to present a barrier to the passage of trout within the river. However, this effect may be beneficial in providing a trout-free reserve for native fish upstream of the weir. Consent 5353-1 required the installation of a structure at the weir that provides unrestricted passage of fish by 1 July 2005. However, as a requirement of the new consents granted for the Patea hydro-electric dam (located downstream of the weir), 'target species' juveniles are to be manually transferred into the headwaters of the Patea Catchment from the lower river. One of the release sites is located immediately upstream of the weir. The requirement for a fish pass at the weir is therefore currently on hold. The success of the upstream transfer programme will be assessed in approximately five years time, at which point, it will be determined whether this fish pass requirement should remain on hold. If the transfer of juvenile fish into the headwaters is abandoned, it is likely that a fish pass will need to be installed.

The fish pass at the Konini take required some maintenance as it was blocked by debris. The weir also need some maintenance. SDC staff undertook necessary works upon request.

Monitoring of the Toko and Midhirst WTP's indicated that these plants were not having any adverse effects on the environment.

3.3 Evaluation of performance

A tabular summary of the consent holder's compliance record for the year under review is set out in Tables 3-12.

Table 3 Summary of performance for Consent 0068-3. To discharge settled filter backwash water from the Stratford municipal WTP via a settling pond into the Patea River

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Proper and efficient maintenance of settlement pond	Inspection	Yes
2. Re-location of outlet from pond to prevent short circuit between inlet and outlet within two months of granting of consent	Inspection	Yes
3. Discharge not to cause certain effects in the Patea River below the mixing zone	Sampling	Yes
4. Limits on suspended solids and chlorine in the discharge	Sampling	Yes
5. Optional review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

Table 4 Summary of performance for Consent 0195-2 To take and use water from the Patea River for Stratford town water supply purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Recording of abstraction rates and provision of data to Council	Data provided upon request	Yes
2. Limit on abstraction rates	Data review	Yes
3. Requirement to reduce abstraction when Patea flow is less than 725 L/s	Data review	Not assessed this period due to data transmission and processing constraints
4. Ability to maintain maximum abstraction rate to establish reservoir storage following plant failure	Liaison with consent holder – not exercised	N/A
5. Implementation of water conservation measures when flow in Patea at or below MALF	Liaison with consent holder and monitoring of stream flows	Yes
6. Mitigation of effects by riparian planting	Planting carried out as required in previous years	Yes
7. Right of Council to suspend or reduce abstraction during extreme low flows	Monitoring of flows	Not required
8. Optional review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		Good

Table 5 Summary of performance for Consent 1421-2 To take and use water from the Konini Stream a tributary of the Paetahi Stream in the Patea catchment for Stratford town water supply purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Recording of abstraction rates and provision of data to Council	Data provided upon request	Yes
2. Limit on abstraction rates	Review abstraction data	Yes although limited by some data transmission and processing constraints
3. Implementation of water conservation measures when flow in Patea at or below MALF	Liaison with consent holder and monitoring of stream flows	Yes
4. Right of Council to suspend or reduce abstraction during extreme low flows	Monitoring of flows	Not required
5. Optional review provision re environmental effects	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		Good

Table 6 Summary of performance for Consent 2452-2 To dam the Konini Stream a tributary of the Paetahi Stream in the Patea Catchment for the Stratford town water supply

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Maintenance of a fish pass at the weir	Inspection and liaison with consent holder. Maintenance was required	No
2. Monitoring of effectiveness of the fish pass	Fish spawning survey	Yes
3. Optional review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		Good
Overall assessment of administrative performance in respect of this consent		High

Table 7 Summary of performance for Consent 5353-1 To dam the Patea River for the Stratford town water supply

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Maintenance of a fish pass at the weir	Inspection and liaison with consent holder – no fish pass at weir. This requirement is on hold.	N/A
2. Construction of fish pass by 1 July 2005 with no disturbance of the River bed between 1 May and 31 October. Maintenance of the fish pass to the satisfaction of the Council	Inspection and liaison with consent holder. This requirement is on hold.	N/A
3. Optional review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		N/A
Overall assessment of administrative performance in respect of this consent		N/A

Table 8 Summary of performance for Consent 6549-1 To repair and maintain an existing weir structure in the Konini Stream a tributary of the Paetahi Stream in the Patea catchment

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Notification of Council prior to maintenance works	Liaison with consent holder and inspection – no maintenance carried out in year under review	N/A
2. In-stream works to only take place between 1 November and 30 April	Liaison with consent holder and inspection – no maintenance carried out in year under review	N/A
3. Adoption of best practicable option	Liaison with consent holder and inspection – no maintenance carried out in year under review	Yes
4. Minimisation of disturbance of riverbed and reinstatement of disturbed areas	Liaison with consent holder and inspection – no maintenance carried out in year under review	N/A
5. Consent to be exercised in accordance with application documentation	Liaison with consent holder and inspection	Yes
6. Structure not to cause erosion of the river channel	Inspection	Yes
7. Certain effects not permitted in the Konini Stream	Inspection	Yes
8. Optional review provision re environmental effects	Next option for review in June 2016	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

3.3.1 Midhirst water supply

Table 9 Summary of performance for Consent 1276-3 To take from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Exercise of consent in accordance with information submitted in support of application	Inspection and liaison with consent holder	Yes
2. Adoption of best practicable option	Inspection and liaison with consent holder	Yes
3. Limit on abstraction rate	Abstraction data provided	Yes
4. Average monthly rate of abstraction not to exceed 254m ³ /day between November-March	Abstraction data provided	No. One monthly reading above limit
5. Rate of abstraction not to exceed 432 m ³ /day between April-October	Abstraction data provided	Yes
6. Total amount of water taken not to exceed 90,000m ³	Abstraction data provided	Yes

7. Annual Report on leaks and water efficiency and conservation	Report provided	Yes
8. Screening of intake structures	Inspection	Yes
9. Recording of abstraction rates and provision of data to Council	Abstraction data provided	Yes
10. Right of Council to suspend or reduce abstraction during extreme low flows	Monitoring of flows – no extreme low flows in monitoring year	N/A
11. Optional review provision	Next option for review in June 2015, recommendation discussed in section 3.6	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		Good
Overall assessment of administrative performance in respect of this consent		Good

Table 10 Summary of performance for Consent 1331-2 To discharge treated filter backwash water from the Midhirst WTP into the Te Popo Stream in the Waitara Catchment via a soakhole

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limit on discharge rates	Inspection	Yes
2. Proper and efficient maintenance of soak hole system	Inspection	Yes
3. Discharge not to cause certain effects in the Te Popo Stream below the mixing zone	Inspection	Yes
4. Limit on chlorine in discharge	Not sampled	N/A
5. Optional review provision	No further option for review prior to expiry	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

3.3.2 Toko water supply

Table 11 Summary of performance for Consent 1337-3 To take and use groundwater from a bore in the vicinity of the Toko Stream in the Patea catchment for Toko rural water supply purposes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Adoption of best practicable option	Inspection	Yes
2. Consent to be exercised in accordance with the application	Inspection	Yes
3. Notification of Council prior to exercise of consent	Not applicable	N/A

Condition requirement	Means of monitoring during period under review	Compliance achieved?
4. Limit on abstraction rate and volume	Review abstraction data	Yes
5. Installation and operation of meter to record abstraction rates and provide data	Data provided upon request	Yes
6. Lapse provision	Not applicable	N/A
7. Optional review provision	Next option for review in June 2016	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

Table 12 Summary of performance for Consent 6605-1 To discharge treated filter backwash water from the Toko WTP into the Toko Stream in the Patea catchment via soak holes

Condition requirement	Means of monitoring during period under review	Compliance achieved?
1. Limit on discharge volume	Inspection	Yes
2. Maintenance and operation of soak hole system to ensure compliance with consent conditions	Inspection	Yes
3. Discharge not to cause certain effects in the Toko Stream below the mixing zone	Inspection	Yes
4. Limit on chlorine in the discharge	Not sampled in this monitoring period	N/A
5. Optional review provision	Next option for review in June 2016	N/A
Overall assessment of consent compliance and environmental performance in respect of this consent		High
Overall assessment of administrative performance in respect of this consent		High

In the 2013-2014 period SDC demonstrated a good level of environmental performance and a good level of administrative performance.

3.4 Recommendations from the 2012-2013 Annual Report

In the 2012-2013 Annual Report, it was recommended:

THAT the monitoring programme for consents associated with SDC's water supply schemes in the 2013-2014 monitoring year remain unchanged from that for 2012-2013.

This recommendation was implemented.

3.5 Alterations to monitoring programmes for 2014-2015

In designing and implementing the monitoring programmes in the region, the Council has taken into account the extent of information made available by previous authorities, its relevance under the RMA the obligations of the Act in terms of monitoring activities, and subsequently reporting to the regional community. The Council also takes into account the scope of assessments required at the time of renewal of permits, and the need to maintain a sound understanding of processes within Taranaki.

It is proposed that for 2014-2015 that the programme remains unchanged from that of 2013-2014. The triennial fish survey will next be undertaken in the 2016-2017 monitoring period.

3.6 Exercise of optional review of consent

Resource consent **1276-3** provides for an optional review of the consent in June 2015. Condition 7 allows the Council to review the consent, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Based on the results of monitoring in the year under review, and in previous years as set out in earlier annual compliance monitoring reports, it is considered that there are no grounds that require a review to be pursued or grounds to exercise the review option.

4. Recommendations

1. THAT the monitoring programme for consents associated with SDC's water supply schemes in the 2014-2015 monitoring year remain unchanged from that for 2013-2014.
2. THAT the option for a review of resource consent **1276-3** in June 2015, as set out in condition 7 of the consent, not be exercised, on the grounds that the current conditions are adequate to deal with any adverse environmental effects.

Glossary of common terms and abbreviations

The following abbreviations and terms may be used within this report:

Fresh	Elevated flow in a stream, such as after heavy rainfall.
g/m ² /day	grams/metre ² /day
g/m ³	Grams per cubic metre, and equivalent to milligrams per litre (mg/L). In water, this is also equivalent to parts per million (ppm), but the same does not apply to gaseous mixtures.
Incident	An event that is alleged or is found to have occurred that may have actual or potential environmental consequences or may involve non-compliance with a consent or rule in a regional plan. Registration of an incident by the Council does not automatically mean such an outcome had actually occurred.
Intervention	Action/s taken by Council to instruct or direct actions be taken to avoid or reduce the likelihood of an incident occurring.
Investigation	Action taken by Council to establish what were the circumstances/events surrounding an incident including any allegations of an incident.
l/s	Litres per second.
Mixing zone	The zone below a discharge point where the discharge is not fully mixed with the receiving environment. For a stream, conventionally taken as a length equivalent to 7 times the width of the stream at the discharge point.
NTU	Nephelometric Turbidity Unit, a measure of the turbidity of water.
pH	A numerical system for measuring acidity in solutions, with 7 as neutral. Numbers lower than 7 are increasingly acidic and higher than 7 are increasingly alkaline. The scale is logarithmic i.e. a change of 1 represents a ten-fold change in strength. For example, a pH of 4 is ten times more acidic than a pH of 5.
Resource consent	Refer Section 87 of the RMA. Resource consents include land use consents (refer Sections 9 and 13 of the RMA), coastal permits (Sections 12, 14 and 15), water permits (Section 14) and discharge permits (Section 15).
RMA	<i>Resource Management Act</i> 1991 and including all subsequent amendments.
SS	Suspended solids.
Turb	Turbidity, expressed in NTU.
UI	Unauthorised Incident.
UIR	Unauthorised Incident Register – contains a list of events recorded by the Council on the basis that they may have the potential or actual environmental consequences that may represent a breach of a consent or provision in a Regional Plan.

For further information on analytical methods, contact the Council's laboratory.

Bibliography and references

- Taranaki Regional Council, 1999a: Stratford District Council Water Supply Plants and Structures Monitoring Programme Annual Report 1997-98. Technical Report 98-83
- Taranaki Regional Council, 1999b: Stratford District Council Water Supply Structures and Operations Monitoring Programme Annual Report 1998-99. Technical Report 99-49
- Taranaki Regional Council, 2000: Stratford District Council Water Supply Structures and Operations Monitoring Programme Annual Report 1999-2000. Technical Report 2000-33
- Taranaki Regional Council, 2001: Stratford District Council Water Supply Structures and Operations Monitoring Programme Annual Report 2000-2001. Technical Report 2001-50
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- Taranaki Regional Council, 2009: Stratford District Council Water Supply Plants and Structures Monitoring Programme Annual Report 2007-2008. Technical Report 2008-103
- Taranaki Regional Council, 2009: Stratford District Council, Stratford, Midhirst and Toko Water Supply Schemes, Monitoring Programme Annual Report 2008-2009. Technical Report 2009-47
- Taranaki Regional Council, 2010: Stratford District Council Water Supply Schemes, Monitoring Programme Annual Report 2009-2010. Technical Report 2010-34
- Taranaki Regional Council, 2011: Stratford District Council Water Supply Schemes, Monitoring Programme Annual Report 2010-2011. Technical Report 2010-17
- Taranaki Regional Council, 2012: Stratford District Council Water Supply Schemes, Monitoring Programme Annual Report 2011-2012. Technical Report 2012-34
- Taranaki Regional Council, 2013: Stratford District Council Water Supply Schemes, Monitoring Programme Annual Report 2012-2013. Technical Report 2013-30

Appendix I

**Resource consents held by
Stratford District Council for the
Stratford, Midhirst and Toko water supply schemes**

Stratford

TRK980068



PRIVATE BAG 713
47 CLOTON ROAD
STRATFORD
NEW ZEALAND
PHONE 0-6-765 7127
FAX 0-6-765 5097

DISCHARGE PERMIT

**Pursuant to the RESOURCE MANAGEMENT ACT 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

Name of
Consent Holder: **STRATFORD DISTRICT COUNCIL
PO BOX 320 STRATFORD**

Renewal
Granted Date: **24 February 1998**

CONDITIONS OF CONSENT

Consent Granted: **TO DISCHARGE UP TO 140 CUBIC METRES/DAY OF SETTLED
FILTER BACKWASH WATER FROM THE STRATFORD
MUNICIPAL WATER TREATMENT PLANT VIA A SETTLING
POND INTO THE PATEA RIVER AT OR ABOUT GR:
Q20:167-068**

Expiry Date: **1 June 2016**

Review Date[s]: **June 2004 and June 2010**

Site Location: **CARDIFF ROAD STRATFORD**

Legal Description: **PT SEC 53A BLK I NGAERE SD**

Catchment: **PATEA 343.000**

For General, Standard and Special Conditions pertaining to this consent please see reverse side of this document.

TRK980068

General conditions

- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.


Special Conditions

- 1. THAT the consent holder shall properly and efficiently maintain and operate the settlement pond system.
- 2. THAT the consent holder shall undertake to re-locate the outlet from the settlement pond to a suitable position for the purposes of preventing a short-circuit between the inlet and outlet, and provision of improved settlement of sediment within the pond; the relocation work to be completed within two months of the granting of the consent.
- 3. THAT after allowing for a mixing zone of 50 metres downstream of the discharge, the discharge shall not give rise to any of the following effects in the Patea River:
 - i) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - ii) any conspicuous change in the colour or visual clarity;
 - iii) any emission of objectionable odour;
 - iv) the rendering of fresh water unsuitable for consumption by farm animals; and
 - v) any significant adverse effects on aquatic life;
- 4. THAT the discharge quality shall not exceed the following limits at all times:

Suspended solids	20 gm ⁻³
Free available chlorine	0.1 gm ⁻³
- 5. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, for the purpose of ensuring that the conditions adequately deal with the environmental effects arising from the exercise of this consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 24 February 1998

For and on behalf of
TARANAKI REGIONAL COUNCIL



DIRECTOR, RESOURCE MANAGEMENT



Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

Please quote our file number
on all correspondence

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Review Completed Date: 5 August 2004 [Granted: 20 July 1998]

Conditions of Consent

Consent Granted: To take and use water from the Patea River for Stratford town water supply purposes at or about GR: Q20:163-071

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Cardiff Road, Pembroke, Stratford

Legal Description: Road Reserve Blk I Ngaere SD

Catchment: Patea

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

www.trc.govt.nz

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall record daily rates of abstraction and shall make such records available to the Taranaki Regional Council upon request.
2. During normal operations the combined water abstraction including water from the Konini Stream [consent 1421] shall not exceed 61 litres/second and the combined maximum of 81 litres/second may only be used for temporary periods to re-establish reservoir storage following a plant failure. The consent holder shall notify the Taranaki Regional Council whenever the peak abstraction is to be exercised.
3. The consent holder shall reduce the abstraction from the Patea River to no more than 41 litres/second when the river is under mean annual low flow conditions or less, equivalent to a flow of 725 litres/second or less measured at Skinner Road [Q20:260-064].
4. Notwithstanding condition 3, the consent holder may temporarily maintain the maximum abstraction rate of 61 litres/second to establish reservoir storage following plant failure in accordance with condition 2.
5. The consent holder shall implement water conservation measures to reduce the water demand at times when the Patea River is under mean annual low flow conditions or less, equivalent to a flow of 725 litres/second or less measured at Skinner Road [Q20:260-064].
6. The consent holder shall mitigate the effects of the abstraction by promoting and undertaking riparian management in the Patea River catchment by:
 - i) a donation of \$9,000 to the Taranaki Tree Trust by 1 January 1999;
 - ii) a contribution of \$9,000 (apportioned over the term of the consent), for riparian works by the consent holder in a manner approved by the Taranaki Regional Council. Further, by 30 June 2004, any remaining funds shall be paid in full to the Taranaki Tree Trust or any other water conservation project approved by the Taranaki Regional Council.

Consent 0195-2

7. The Taranaki Regional Council reserves the right to temporarily suspend or reduce the abstraction during extreme low flow events, in order to protect the biological communities in the stream, in accordance with section 329 of the Resource Management Act 1991.
8. The Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or 2010, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 5 August 2004

For and on behalf of
Taranaki Regional Council



Director-Resource Management



Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

Please quote our file number
on all correspondence

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Review Completed Date: 5 August 2004 [Granted: 20 July 1998]

Conditions of Consent

Consent Granted: To take and use water from the Konini Stream a tributary of the Paetahi Stream in the Patea catchment for Stratford town water supply purposes at or about GR: Q20:157-068

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Cardiff Road, Pembroke, Stratford

Legal Description: DP 3278 Pt Sec 25 Pt DP 3759 Pt Secs 25 & 26 Blk IV
Kaupokonui SD

Catchment: Patea

Tributary: Paetahi
Konini

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The consent holder shall record daily rates of abstraction and shall make such records available to the Taranaki Regional Council upon request.
2. During normal operations the combined water abstraction including water from the Patea River [consent 0195] shall not exceed 61 litres/second and that the combined maximum of 81 litres/second may only be used for temporary periods to re-establish reservoir storage following a plant failure. The consent holder shall notify the Taranaki Regional Council whenever the peak abstraction is to be exercised.
3. The consent holder shall implement water conservation measures to reduce the water demand at times when the Patea River is under mean annual low flow conditions or less, equivalent to a flow of 725 litres/second or less measured at Skinner Road [Q20:260-064].
4. The Taranaki Regional Council reserves the right to temporarily suspend or reduce the abstraction during extreme low flow events, in order to protect the biological communities in the stream, in accordance with section 329 of the Resource Management Act 1991.

Consent 1421-2

5. The Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 5 August 2004

For and on behalf of
Taranaki Regional Council



Director-Resource Management

TRK982452

General conditions


- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

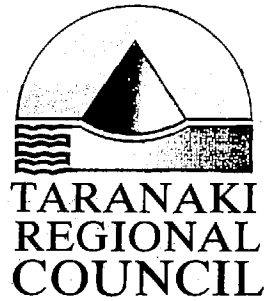
- 1. THAT the consent holder shall maintain a structure at the weir to provide for the unrestricted passage of native fish, juvenile and adult trout.
- 2. THAT the consent holder shall monitor the effectiveness of the fish pass in providing for the passage of adult trout.
- 3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this consent, which were not foreseen at the time the application was considered and which it was not appropriate to deal with at that time.

Signed at Stratford on 20 July 1998

For and on behalf of
TARANAKI REGIONAL COUNCIL



DIRECTOR, RESOURCE MANAGEMENT




PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 0-6-765 7127
FAX 0-6-765 5097

Land Use Consent

**Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council**

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Change To
Conditions Date:  22 March 2000 [Granted: 20 July 1998]

Conditions of Consent

Consent Granted: To dam the Patea River for the Stratford town water supply
at or about GR: Q20:163-070

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Cardiff Road, Cardiff, Stratford

Legal Description: River Reserve Blk I Ngaere SD

Catchment: Patea

General conditions

- a) That on receipt of a requirement from the General Manager, Taranaki Regional Council (hereinafter the General Manager), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions



1. THAT the consent holder shall design and install a structure at the weir to provide for the unrestricted passage of fish. The species of fish that the fish pass is to be designed for shall be determined prior to its installation, to the approval of the General Manager, Taranaki Regional Council.
2. THAT the fish pass structure, required by condition 1, shall be constructed by 1 July 2005, and thereafter be maintained and operated to the satisfaction of the General Manager. In constructing the fish pass structure, there shall be no disturbance of any part of the bed covered by water between 1 May and 31 October.
3. THAT the Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during the month of June 2004 and/or June 2010, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this consent, which either were not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 22 March 2000

For and on behalf of
Taranaki Regional Council

Director-Resource Management



Land Use Consent
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

Please quote our file number
on all correspondence

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Consent Granted
Date: 31 January 2005

Conditions of Consent

Consent Granted: To repair and maintain an existing weir structure in the
Konini Stream a tributary of the Paetahi Stream in the
Patea catchment at or about GR: Q20:157-068

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: Cardiff Road, Cardiff, Stratford

Legal Description: Pt Secs 25 DP 3759 Blk IV Kaupokonui SD

Catchment: Patea

Tributary: Paetahi
Konini

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

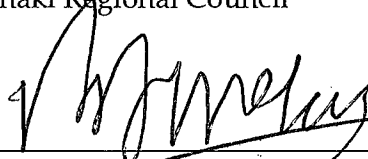
1. The consent holder shall notify the Taranaki Regional Council at least 48 hours prior to the commencement and upon completion of the initial activity and again prior to and upon completion of any subsequent maintenance works which would involve disturbance of or deposition to the riverbed or discharges to water.
2. Any instream works shall take place only between 1 November and 30 April inclusive, except where this requirement is waived in writing by the Chief Executive, Taranaki Regional Council.
3. The consent holder shall adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to avoid or minimise the discharge of silt or other contaminants into water or onto the riverbed and to avoid or minimise the disturbance of the riverbed and any adverse effects on water quality.
4. The consent holder shall ensure that the area and volume of riverbed disturbance shall, so far as is practicable, be minimised and any areas which are disturbed shall, so far as practicable, be reinstated.
5. The exercise of this consent shall be under taken generally in accordance with the documentation submitted in support of application 3542. In the case of any contradiction between the documentation submitted in support of application 3542 and the conditions of this consent, the conditions of this consent shall prevail.
6. The structure[s] which are the subject of this consent shall not cause erosion of the river channel, and measures shall be taken by the consent holder to prevent erosion of the river channel.

Consent 6549-1

7. After allowing for reasonable mixing, being a mixing zone extending seven times the width of the Konini Stream at the point of discharge, any discharge of contaminants shall not give rise to any of the following effects in the Konini Stream:
- a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life.
8. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2010 and/or June 2016, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 31 January 2005

For and on behalf of
Taranaki Regional Council



Director-Resource Management

Midhirst



Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

Please quote our file number
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Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Consent Granted
Date: 9 June 2003

Conditions of Consent

Consent Granted: To take a maximum of 70,000 cubic metres of water per year, with a maximum of 254 cubic metres/day in summer [1 November to 31 March] and 432 cubic metres/day in winter [1 April to 31 October], at a maximum rate of 5 litres/second, from the Te Popo Stream a tributary of the Manganui River in the Waitara catchment for Midhirst community public water supply purposes at or about GR: Q20:190-122

Expiry Date: 1 June 2021

Review Date(s): June 2009, June 2015

Site Location: Mountain Road, Midhirst

Legal Description: Lot 7 DP 14836 Blk XIII Huiroa SD

Catchment: Waitara

Tributary: Manganui
Te Popo

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

Consent 1276-3

General conditions


- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The exercise of this consent shall be conducted in accordance with the information submitted in support of the application and to ensure that the conditions of the consent are met at all times.
2. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to avoid or minimise any adverse effects on the environment as a result of the exercise of this consent.
3. The peak extraction rate shall not exceed 5 litres/second
4. All intake structures shall be screened to avoid the entrainment of fish.
5. The consent holder shall install and operate a measuring device capable of accurately recording daily rates of abstraction and shall measure, record and make such records available to the Chief Executive, Taranaki Regional Council, upon request.
6. That the Taranaki Regional Council reserves the right to temporarily suspend or reduce the abstraction during extreme low flow events, in order to protect the biological communities in the stream, in accordance with 329 of the Resource Management Act 1991.
7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2009 and/or June 2015 for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 9 June 2003

For and on behalf of
Taranaki Regional Council



Chief Executive



Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 0-6-765 7127
FAX 0-6-765 5097

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Change To
Conditions Date: 12 September 2000 [Granted: 21 August 1991]

Conditions of Consent

Consent Granted: To discharge treated filter backwash water from the Midhirst Water Treatment Plant into the Te Popo Stream in the Waitara Catchment via a soak hole at or about GR:Q2O 190-122

Expiry Date: 1 June 2016

Review Date(s): June 2004, June 2010

Site Location: Midhirst Water Treatment Plant, Mountain Road (SH3), Midhirst

Legal Description: Lot A DP 14836 Blk XIII Huiroa SD

Catchment: Waitara

Tributary: Te Popo

Consent 1331-2

General conditions

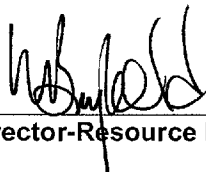
- a) That on receipt of a requirement from the Chief Executive, Taranaki Regional Council (hereinafter the Chief Executive), the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) That unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) That the consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

1. The discharge shall not exceed 35 cubic metres/day.
2. The consent holder shall properly and efficiently maintain and operate the soak hole system so as to meet the conditions of this consent.
3. After allowing for reasonable mixing, within a mixing zone extending 20 metres below the discharge point, the discharge shall not give rise to any of the following effects in the Te Popo Stream:
 - (a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
 - (b) any conspicuous change in the colour or visual clarity;
 - (c) any emission of objectionable odour;
 - (d) the rendering of fresh water unsuitable for consumption by farm animals;
 - (e) any significant adverse effects on aquatic life, habitats, or ecology.
4. The discharge shall not exceed 0.1gm^{-3} free available chlorine at all times.
5. The Taranaki Regional Council may review any or all of the conditions of this consent by giving notice of review during June 2004 and/or June 2010, for the purpose of ensuring that the conditions are adequate to deal with any significant adverse effects on the environment arising from the exercise of this consent, which either were not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

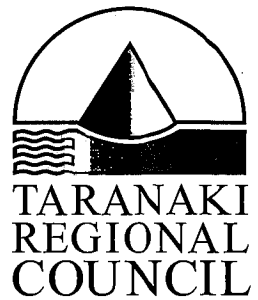
Signed at Stratford on 12 September 2000

For and on behalf of
Taranaki Regional Council



Director-Resource Management

Toko



CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE: 06-765 7127
FAX: 06-765 5097
www.trc.govt.nz

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Water Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Consent Granted
Date: 17 June 2005

Conditions of Consent

Consent Granted: To take and use groundwater from a bore in the vicinity of
the Toko Stream in the Patea catchment for Toko rural
water supply purposes at or about GR: Q20:298-068

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: East Road, Toko

Legal Description: Lot 1 DP 15670 Blk III Ngaere SD

Catchment: Patea

Tributary: Toko

*For General, Standard and Special conditions
pertaining to this consent please see reverse side of this document*

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions

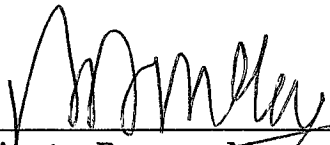
1. The consent holder shall at all times adopt the best practicable option, as defined in section 2 of the Resource Management Act 1991, to prevent or minimise any adverse effects on the environment from the exercise of this consent.
2. The exercise of this consent shall be undertaken generally in accordance with the documentation submitted in support of application 2743 and shall ensure efficient and effective use of water. In the case of any contradiction between the documentation submitted in support of application 2743 and the conditions of this consent, the conditions of this consent shall prevail.
3. The consent holder shall notify the Chief Executive, Taranaki Regional Council, in writing at least seven days prior to the exercise of this consent.
4. The volume of groundwater abstracted shall not exceed 80 cubic metres per day at a rate not exceeding 5.6 litres per second.
5. The consent holder shall install and operate a device capable of accurately recording daily rates of abstraction and shall measure, record and make such records available to the Chief Executive, Taranaki Regional Council, upon request.
6. This consent shall lapse on the expiry of five years after the date of issue of this consent, unless the consent is given effect to before the end of that period or the Taranaki Regional Council fixes a longer period pursuant to section 125(1)(b) of the Resource Management Act 1991.

Consent 1337-3

7. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during the month of June 2010 and/or June 2016, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 17 June 2005

For and on behalf of
Taranaki Regional Council



Director-Resource Management



Discharge Permit
Pursuant to the Resource Management Act 1991
a resource consent is hereby granted by the
Taranaki Regional Council

CHIEF EXECUTIVE
PRIVATE BAG 713
47 CLOTEN ROAD
STRATFORD
NEW ZEALAND
PHONE 06-765 7127
FAX 06-765 5097

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Name of
Consent Holder: Stratford District Council
P O Box 320
STRATFORD

Consent Granted
Date: 29 April 2005

Conditions of Consent

Consent Granted: To discharge treated filter backwash water from the Toko Water Treatment Plant into the Toko Stream in the Patea catchment via soak holes at or about GR: Q20:298-068

Expiry Date: 1 June 2022

Review Date(s): June 2010, June 2016

Site Location: East Road, Toko

Legal Description: Lot 1 DP 15670 Blk III Ngaere SD

Catchment: Patea

Tributary: Toko

General conditions

- a) On receipt of a requirement from the Chief Executive, Taranaki Regional Council the consent holder shall, within the time specified in the requirement, supply the information required relating to the exercise of this consent.
- b) Unless it is otherwise specified in the conditions of this consent, compliance with any monitoring requirement imposed by this consent must be at the consent holder's own expense.
- c) The consent holder shall pay to the Council all required administrative charges fixed by the Council pursuant to section 36 in relation to:
 - i) the administration, monitoring and supervision of this consent; and
 - ii) charges authorised by regulations.

Special conditions


1. The discharge shall not exceed 4 cubic meters per day, per soak hole.
2. The consent holder shall properly and efficiently maintain and operate the soak hole system so as to meet the conditions of this consent.
3. After allowing for reasonable mixing, with a mixing zone extending 20 meters below the discharge point, the discharge shall not give rise to any of the following effects in the Toko Stream:
 - a) the production of any conspicuous oil or grease films, scum or foams, or floatable or suspended materials;
 - b) any conspicuous change in the colour or visual clarity;
 - c) any emission of objectionable odour;
 - d) the rendering of fresh water unsuitable for consumption by farm animals;
 - e) any significant adverse effects on aquatic life, habitats, or ecology.
4. The discharge shall not exceed 0.1 g/m³ cubic meters free available chlorine at all times.

Consent 6605-1

5. In accordance with section 128 and section 129 of the Resource Management Act 1991, the Taranaki Regional Council may serve notice of its intention to review, amend, delete or add to the conditions of this resource consent by giving notice of review during June 2010 and/or June 2016, for the purpose of ensuring that the conditions are adequate to deal with any adverse effects on the environment arising from the exercise of this resource consent, which were either not foreseen at the time the application was considered or which it was not appropriate to deal with at the time.

Signed at Stratford on 29 April 2005

For and on behalf of
Taranaki Regional Council



Director-Resource Management

