



*PO Box 60*

*Lancelin WA 6044*

*Ph: 08 9655 1555*

*[admin@lancelinsouthwater.com.au](mailto:admin@lancelinsouthwater.com.au)*

*ABN 18 152 331 238*

**Report to the Department of Health**

by

**Lancelin South**

for the period

**1 January 2020 to 31 March 2020**

---

## Contents

<b>1.0</b>	<b>WATER PROVIDER INFORMATION .....</b>	<b>4</b>
<b>2.0</b>	<b>PERFORMANCE SUMMARY.....</b>	<b>5</b>
<b>3.0</b>	<b>MICROBIAL PERFORMANCE.....</b>	<b>6</b>
3.1	Microbiological - Exception Notifications	6
3.2	Microbiological - Performance	6
<b>4.0</b>	<b>CHEMICAL - HEALTH RELATED PERFORMANCE .....</b>	<b>7</b>
4.1	Chemical - Health Related - Exception Notifications	7
4.2	Chemical - Health Related - Performance	7
<b>5.0</b>	<b>CHEMICAL - AESTHETIC PERFORMANCE .....</b>	<b>8</b>
5.1	Chemical - Aesthetic - Exception Notifications	8
5.2	Chemical – Aesthetic Performance	8
<b>6.0</b>	<b>RADIOLOGICAL PERFORMANCE.....</b>	<b>10</b>
5.1	Radiological - Exception Notifications	10
5.2	Radiological – Performance	10
<b>7.0</b>	<b>SAMPLING PROGRAMME .....</b>	<b>11</b>
7.1	Summary of Achieved Versus Planned Sampling for Period	11
7.2	Planned Sampling Summary for Next Period	11
<b>8.0</b>	<b>GENERAL NOTES / OTHER.....</b>	<b>12</b>
	Table 1: Water Provider Contact Details.....	4
	Table 2: Lancelin South System Information.....	4
	Table 3: Water Quality Meeting the Drinking Water Guidelines / Minister of Health’s Directions .....	5
	Table 4: Microbiological compliance summary.....	6
	Table 5: Summary of chemical - health related - analyses at Consumer SP .....	7
	Table 6: Summary of chemical - health related - analyses at Treated Water SP.....	7
	Table 7: Summary of aesthetic related analyses from consumer sampling point .....	8
	Table 8: Summary of aesthetic related analyses from Treated Water Tank sampling point .....	9
	Table 9: Summary of aesthetic related analyses from source sampling point .....	9
	Table 10: Summary of achieved versus planned sampling .....	11
	Table 11: Planned sampling program for April - June 2020 (Q2) .....	11



## 1.0 Water Provider Information

**Table 1: Water Provider Contact Details**

Name of Company	Lancelin South		
Company Address	PO Box 60, Lancelin, WA, 6044		
Company Phone	08 9655 1555	Fax	
Company Email	admin@lancelinsouthwater.com.au		
Chief Executive Officer			
CEO Email			
DoH Liaison Officer	Blair Shackleton, GHD		
DoH Liaison Officer Email	Blair.shackleton@ghd.com		

**Table 2: Lancelin South System Information**

Number of consumers	13
Average water supplied (L/day)	218
Sources of water	100% groundwater
Treatment systems	Media filtration, GAC filtration, RO, chlorination
Length of mains	Approximately 1.6 km
Number of zones	1
Number of sample points	3 (Bore SP, treated water tank SP, consumer SP)

### Source Details

Raw water for the Lancelin South residential development is sourced from a single production bore, tapping the Leederville aquifer within the Lancelin South water reserve, approximately 250 m east of the Lancelin South development. The catchment within the water reserve is natural bushland.

### Distribution System

The fenced Water Treatment Plant is located at the existing bore site (adjacent to Lancelin Road). Treated and chlorinated water is stored in a single tank adjacent to the water treatment plant. Potable water is supplied via a gravity system through approximately 1,600 m of DN 250 and DN 300 PVC (polyvinyl chloride) pipeline along Lancelin Road Reserve with a distribution network currently of approximately 1,900 m of HDPE (high density polyethylene) pipeline.

## 2.0 Performance Summary

**Table 3: Water Quality Meeting the Drinking Water Guidelines / Minister of Health's Directions**

	Number Assessed (1)	Number of Non-Compliant Analyses (2)	% Compliance
Microbiological Quality			
Thermotolerant Coliforms / <i>E.coli</i>	11	0	100%
Amoeba (Thermophilic Naegleria)	4	0	100%
Chemical Quality <sup>(3)</sup>			
Chemical – Health related <sup>(4)</sup>	18	0	100%
Chemical – Aesthetic <sup>(5)</sup>	49	8	84%
Radiological	0	0	NA

**Notes:**

- (1) Number of samples taken for the quarter from Consumer Sampling Point
- (2) Number of samples that do not comply with the drinking water guidelines (ADWG).
- (3) Chemical performance is based on the results of the quarter.
- (4) Chemicals with ADWG Health guideline;
- (5) Chemicals with ADWG aesthetic guideline value

### 3.0 Microbial Performance

#### 3.1 Microbiological - Exception Notifications

Nil incidents in the reporting period.

#### 3.2 Microbiological - Performance

**Table 4: Microbiological compliance summary**

	Sampling Point	Number of Analyses <sup>(1)</sup>	Number of Non-Compliant Analyses	% Compliance
<i>E. coli</i>	Treated Water Tank	4	0	100%
	Consumer	7	0	100%
Thermophilic <i>Naegleria</i>	Consumer	4	0	100%
<i>Naegleria fowleri</i>	Consumer	0 <sup>(2)</sup>	0	100%

Notes:

(1) Microbiological assessment performed on 2 samples taken at Consumer sample point and 2 from Treated Water Tank sample point

(2) Analysis for *N. fowleri* only required if thermophilic *Naegleria* detected

## 4.0 Chemical - Health Related Performance

### 4.1 Chemical - Health Related - Exception Notifications

---

Number of chemical, health related, incidents resulting in exemption notification 0

---

### 4.2 Chemical - Health Related - Performance

#### Consumer Sample Point

---

Number of field analyses of residual chlorine 8

Number of laboratory analyses for health related water quality parameters 1

---

**Table 5: Summary of chemical - health related - analyses at Consumer SP**

	No Samples	No Analyses	Unit	ADWG Limit (Health)	Maximum value	No of Analyses Non-Compliant <sup>(1)</sup>	% Compliance
Chlorine (field)	8	8	mg/L	5	0.99	0	100%
Chlorine (lab)	1	1	mg/L	5	0.47	0	100%
Total Mn	1	1	mg/L	0.1	<0.01	0	100%

#### Treated Water Sample Point

---

Number of field analyses of residual chlorine 8

Number of laboratory analyses for health related water quality parameters 0

---

**Table 6: Summary of chemical - health related - analyses at Treated Water SP**

	No Samples	No Analyses	Unit	ADWG Limit (Health)	Maximum value	No of Analyses Non-Compliant <sup>(1)</sup>	% Compliance
Chlorine (field)	8	8	mg/L	5	0.99	0	100%

#### Source Sampling Point

---

Number of laboratory analyses for health related water quality parameters 0

---

## 5.0 Chemical - Aesthetic Performance

### 5.1 Chemical - Aesthetic - Exception Notifications

Number of chemical, aesthetic incidents resulting in exemption notification	0
---	---

### 5.2 Chemical – Aesthetic Performance

#### Consumer Sampling Point

Number of field analyses for aesthetic water quality parameters	16
Number of laboratory analyses for aesthetic water quality parameters	13

**Table 7: Summary of aesthetic related analyses from consumer sampling point**

Aesthetic Characteristic (guideline limit)	Number of Analyses <sup>(1)</sup>	Number of Analyses Non- compliant	% Compliance	Maximum value
Temperature, °C (25)	8	3	62%	26
pH (6.5 – 8.5)	9	0	100%	7.1 - 7.7
TDS, mg/L (600)	1	0	100%	520
Total Suspended Solids, mg/L	1	0	100%	<5
Turbidity, NTU (5)	1	0	100%	0.5
Colour, PCU (15)	1	0	100%	<5
Hardness, mg/L as CaCO <sub>3</sub> (200)	1	0	100%	150
Chloride, mg/L as Cl (250)	1	0	100%	220
Sulphate, mg/L as SO <sub>4</sub> (250)	1	0	100%	26
Sodium, mg/L as Na (180)	1	0	100%	87
Aluminium, mg/L as Al (0.2)	1	0	100%	0.01
Iron, mg/L as Fe (0.3)	1	0	100%	<0.01
Manganese, mg/L as Mn (0.1)	1	0	100%	<0.01
Ammonia, mg/L as NH <sub>3</sub> (0.5)	1	0	100%	<0.02

#### Treated Water Tank Sampling Point

Number of field analyses for aesthetic water quality parameters	10
Number of laboratory analyses for aesthetic water quality parameters	0



**Table 8: Summary of aesthetic related analyses from Treated Water Tank sampling point**

Aesthetic Characteristic (guideline limit)	Number of Analyses	Number of Analyses Non- compliant	% Compliance	Maximum value
Temperature, °C (25)	5	1	80%	26
pH (6.5-8.5)	5	0	100%	7.2 - 7.6

**Source Sampling Point**

---

Number of field analyses for aesthetic water quality parameters	10
Number of laboratory analyses for aesthetic water quality parameters	0

---

**Table 9: Summary of aesthetic related analyses from source sampling point**

Aesthetic Characteristic (guideline limit)	Number of Analyses	Number of Analyses Non- compliant	% Compliance	Maximum value
Temperature, °C (25)	5	4	20%	26
pH (6.5-8.5)	5	0	100%	6.6 - 7.2

## **6.0 Radiological Performance**

### **5.1 Radiological - Exception Notifications**

---

Number of radiological water quality analyses resulting in exemption notification	0
---	---

---

### **5.2 Radiological – Performance**

---

Number of samples collected for laboratory analysis of radiological parameters	0
--	---

---

Next sampling from source sampling point for radiological analysis due in quarter 4 (October – December) 2020.

## 7.0 Sampling Programme

### 7.1 Summary of Achieved Versus Planned Sampling for Period

**Table 10: Summary of achieved versus planned sampling**

		Planned	Taken	% Taken
Microbiological	Treated Water SP	3	4	100%
	Consumer SP	15	11	73%
Chemical	Source SP	18	10	55%
	Treated Water SP	24	18	75%
	Consumer SP	30	39	100%
Radiological	Source SP	0	0	NA
	Treated Water SP	0	0	NA
	Consumer SP	0	0	NA

### 7.2 Planned Sampling Summary for Next Period

**Table 11: Planned sampling program for April - June 2020 (Q2)**

		Planned sampling	Frequency	Total No. of Analyses
Microbiological	Treated Water SP	Thermotolerant Coliforms / <i>E.coli</i> Amoeba (Thermophilic Naegleria)	4 weeks	6
	Consumer SP	Thermotolerant Coliforms / <i>E.coli</i> Amoeba (Thermophilic Naegleria)	2 weeks	12
Chemical	Source SP	Field (pH, Cond'y, TDS, Temp)	2 weeks	24
		Laboratory	Once	52
	Treated Water SP	Field (Cl <sub>2</sub> , pH, Cond'y, TDS, Temp)	2 weeks	30
		Laboratory		0
	Consumer SP	Field (Cl <sub>2</sub> , pH, Cond'y, TDS, Temp)	2 weeks	30
		Laboratory	Once	0

Note: Refer to Section 7.3 for details of laboratory analysis suites.

## **8.0 General Notes / Other**

Software and mechanical issue encountered on 16 Jan 2020 with chemical dosing pump caused low chlorine within the system. Additional chlorine was added at the time of the incident to maintain levels within the down stream infrastructure.

Regular fortnightly checks of pH, chlorine and water temperature using hand held instrumentation at the WTP (Source and Treated Water sampling points) and the Lancelin South sales office (Consumer sample point) are carried out by Lancelin South Water.