Our Reference: DM#7066846-v2
Your Reference: MAN19640
Contact Officer: John Mills
Telephone: 0407 124 099

28 June 2017

Compliance Delivery Manager
Department of Environment and Heritage Protection
P.O. Box 731
TOOWOOMBA QLD 4350

Attn: Sarah Horton

Dear Ms Horton

Re: TEP Progress Report #1 Clifton WWTP for Period 12 April 2017 to 30 June2017 (MAN19640)

The following progress report has been prepared and submitted in accordance with the reporting requirements of the approved Transitional Environmental Program MAN19640 that came into effect on the 12 April 2017 and remains in force for the period 12 April 2017 to 30 October 2019.

Actions Undertaken 12 April 2017 to 30 June 2017

1. **Desludge Lagoon 4:**	**Status:** In Progress	**Target Date:** 30 July 2017	**Progress:** On Track
2. **Licence Monitoring**	**Status:** In Progress	**Target Date:** 30 Nov 2018	**Progress:** On Track

Comments:

1. **Desludging**

The desludging program is progressing well with isolation of Lagoon 4 completed and drying of the sludge is in progress. (See **Attachment 2** Photograph 1) The drying process was hindered by rainfall over the May 2017 period and this has delayed the excavation and removal of sludge. BK Hire is engaged to complete the excavation work by 30 July 2017.

The expectation is that removal of sludge will commence early July 2017 and the Target Date of 30 July 2017 will be achieved.

Reinstatement of the floating wetland system will also be completed by this date.

2. **Licence Monitoring**

Licence monitoring in accordance with the requirements of the TEP commenced on 9 March 2017. The results of monitoring can be found in **Attachment 2**.

There has been a Quality Control (QC) issue with some of the BOD_5 results and this has been reported the Department through exceedance reports and email. The effect of the QC failure in some samples is to reduce the confidence in the results for those specific samples and as such, the results cannot be issued under a NATA certificate. For the sake of completeness, the attached BOD_5 Data Table includes these "results" and they can be identified in the Table as a red highlighted result.

P 13 6872 | E tcc@tr.qld.gov.au | www.tr.qld.gov.au | PO Box 3021 Toowoomba QLD 4350
Toowoomba Regional Council ABN 99 788 305 360

The Principal Scientist has been conducting investigations into this issue and in the interim duplicate BOD_5 samples will be sent to an alternative NATA certified lab.

3. Milestones Achieved

1.	Investigate Floating Wetland removal options with SPEL:	Status: Completed	17-5-2017
2.	Determine temporary storage options for sludge:	Status: Completed	21-4-2017
3.	Isolation of lagoon 4 and new temporary discharge point:	Status: Completed	17-5-2017
4.	Identify risks to effluent quality:	Status: Completed	01-3-2017
5.	Assess risk of desludging to lagoon integrity:	Status: In Progress	Target 30-07-17
6.	Undertake Desludging Works:	Status: In Progress	Target 30-07-17
7.	Reinstate floating wetland:	Status: Not Started	Target 30-07-17

4. Actions to be under-taken in the next three (3) months.

1.	Power augmentation to site:	Target Dates: 30/06/2017 to 31/12/2017
2.	Installation of Aeration System Lagoon 4:	Target Dates: 30/06/2017 to 31/12/2017
3.	Install baffle curtain wall Lagoon 4:	Target Dates: 30/06/2017 to 31/12/2017
4.	Licence Monitoring :	Target Dates: Ongoing for period

If you require further clarification on the content of this report please contact Mr David Gleeson Principal Management Systems on 0407657338.

Kindest Regards

John Mills
Manager Water Operations

Attachment #1

Compliance Evaluation

(All Action Items)

TABLE 1

Actions	Start date	Compliance and End date
1. Desludge Lagoon 4: • Investigate Floating Wetland removal options with SPEL • Determine temporary storage options for sludge, • Options for isolation of lagoon 4 and new temporary discharge point. • Identify risks to effluent quality. • Assess risk of desludging to lagoon integrity. (Monitor desludging closely) • Undertake works. • Reinstate floating wetland.	12 April 2017	• **Completed** • **Completed** • **Completed** • **Completed** • **Completed** • **In Progress**-Target 30 July 2017 • **In Progress**-Target 30 July 2017 • **Not Started**-Target 30 July 2017
2. Power augmentation to site: • Scope additional power requirements. (See action Item 3 and 7) • Total power requirement. (Aerators + contingency filtration depending on performance of aerators.) • Location of infrastructure. • Ergon/contractor timelines. • Installation of Infrastructure.	30 June 2017	**Future**-Target 31 Dec 2017
3. Installation of Aeration System Lagoon 4: • Design and implement an aeration system to treat wastewater on site and to release effluent compliant with Condition (C9) to waters at location W1. • Investigate preferred models and supply times. • Investigate fixing method and location. • Assessment of need to reinforce embankments. • Establish site access for installation. • Undertake works.	30 June 2017	**Future**-Target 31 Dec 2017
4. Install baffle curtain wall • Scope requirements length/depth/materials • Source providers • Engage contractor • Undertake works	**30 June 2017**	**Future**-Target 31 Dec 2017
5. Licence Performance Monitoring (4 Seasons) • Frequency Weekly (review as program proceeds) • Analysis (As required by licence)	Pre-Aeration 1 January 2017 Post Aeration 1 January 2018	Pre-Aeration **In Progress**- Target 31 Dec 2017 Post Aeration- **Future-Target** 30 Nov 2018
6. Assess seasonal process performance and need for contingency plan to meet licence discharge limits. • Review effluent data and compliance performance • Assess need for contingency plan activation (eg filter system) • Advise EHP of outcome. • If required activate contingency plan.	1 Dec 2018	**Future**- Target 1 January 2019
7. Contingency Plan (Filtration System) • Installation • Monitor for 3 months	Installation 1 January 2019 Monitor 1 April 2019	**Not Required to Date** Installation 31 March 2019 **Not Required to Date** Monitor 30 June 2019

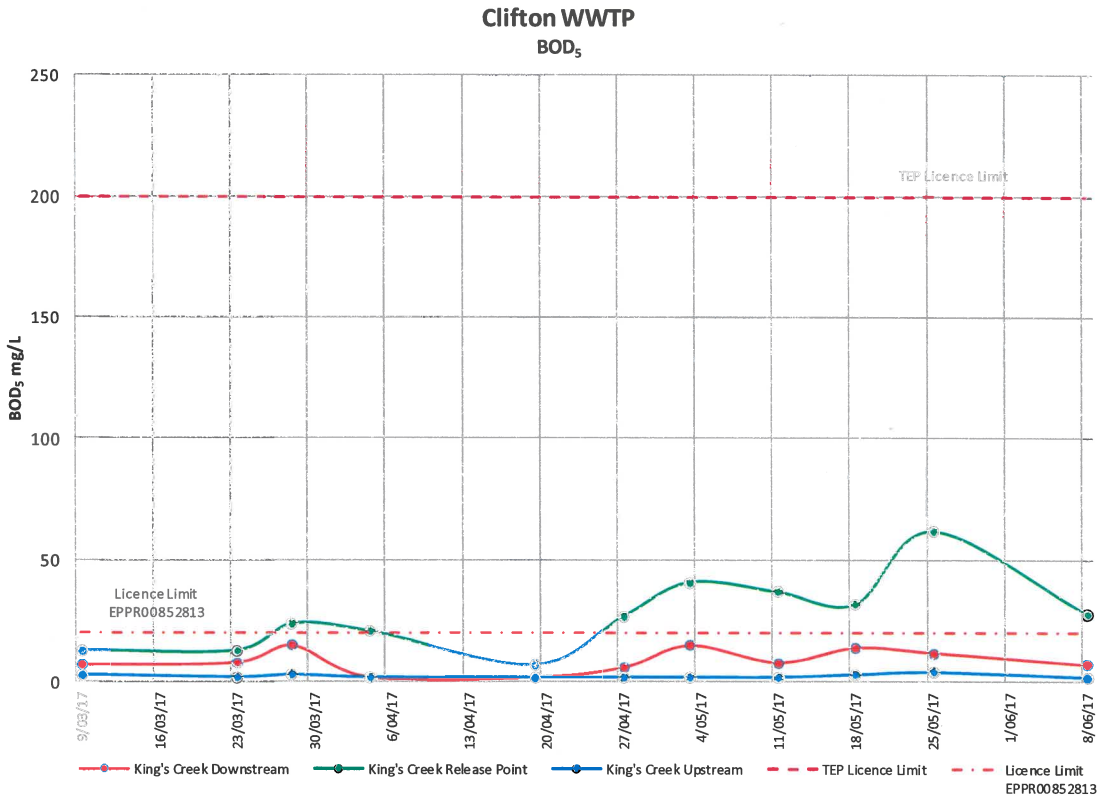
8. TEP Progress reports against Action plan • Evaluate Performance against licence. (EHP Report) • TEP Annual Return • Final Report to EHP (Includes Contingency Timeframe)	Ongoing Ongoing End of program	**In Progress**-Target 3 monthly **Future**-12 monthly **Future**-30 October 2019
Performance indicators	**Start date**	**End date**
1. The design and installation of treatment system infrastructure is supervised by a Registered Professional Engineer.	3 January 2017	**Compliant**-Target 30 Sept 2019
2. Regular performance reviews which include a statement of achievement against the Action Plan to be submitted to EHP.	3 Monthly	**Compliant**- Target 30 Sept 2019
3. Each performance review will include Table(s) and Graph(s) of all water quality in-situ monitoring results and laboratory results.	3 Monthly	**Compliant**-Target 30 Sept 2019
4. Each performance review will include a compliance statement for Condition (C9).The release of contaminants to waters, at the sampling and in situ measurement point specified In Schedule H, with each of the limits specified in schedule C Table 1 for each quality characteristic in Environmental Authority EPPR00852813 of WT0076 Amendment 2.	3 Monthly	**Compliant**-Target 30 Sept 2019
Monitoring	**Start date**	**End date**
1. All monitoring will be undertaken by suitably qualified Water Operations staff and water quality samples are to be analysed by TRC's NATA accredited laboratory.	1 January 2017	**Compliant**-Target 31 August 2019
2. All water quality sampling will be undertaken by Water Operations staff under the guidance of TRC's NATA certified Laboratory and with reference to the Queensland's Government Monitoring and Sampling Manual.	1 January 2017	**Compliant**-Target 31 Aug 2019
3. Monitor the release of contaminants to waters which is to comply, at the sampling and in situ measurement point W1 specified in Schedule H, with each of the limits specified in Schedule C Table 1 for each quality characteristic in Environmental Authority EPPR00852813. (See Attach 2 and Attach 5 - Table 1 and 2)	Frequency Weekly	**Commenced**-Target 31 Aug 2019
4. Monitor Kings Creek 50m upstream and 50m downstream of Release Point W1 for each quality characteristic specified in schedule C Table 1 Environmental Authority EPPR00852813. (See Attachment 5)	Frequency Weekly	**Commenced** –Target 31 Aug 2019
Reporting	**Start date**	**End date**
1. A three (3) monthly progress report will be prepared and submitted to EHP by the Principal Management Systems detailing the actions taken, milestones achieved and the forecasted actions to be undertaken for the following three (3) months. Three (3) monthly progress reports will also include tables and graphs of water quality monitoring results taken at the sampling and in situ measurement point W1 and 50m upstream and 50m downstream of W1.	Ongoing	31 March 2017-**Not required** 30 June 2017-**Completed** 30 Sept 2017-**Future** 31 Dec 2017- **Future** 31 March 2018- **Future** 30 June 2018- **Future** 30 Sept 2018- **Future** 31 Dec 2018- **Future** 31 March 2019- **Future** 30 June 2019- **Future** 30 Sept 2019- **Future**
2. A final report describing how the objectives of the TEP have been achieved will be provided to EHP within one (1) month after completion of the actions of the TEP and prior to the end date of the TEP.	30 Sept 2019	30 October 2019- **Future**

Attachment #2
Data and Graphs

Graph 1-BOD_5

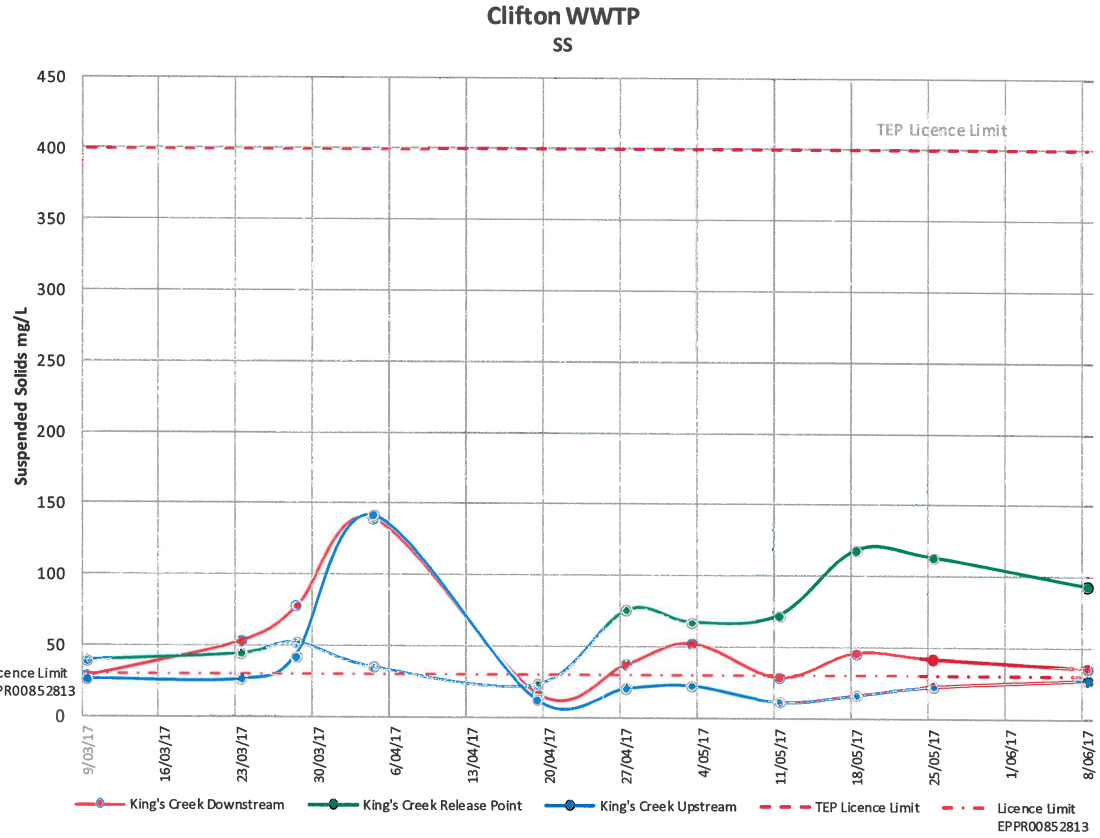
Clifton WWTP					
Reg. Date	Sample Description	Test	Result	Units	TEP Licence Limit
9/03/2017	King's Creek Downstream	BOD5	7	mg/L	200
23/03/2017	King's Creek Downstream	BOD5	8	mg/L	200
28/03/2017	King's Creek Downstream	BOD5	15	mg/L	200
4/04/2017	King's Creek Downstream	BOD5	2	mg/L	200
19/04/2017	King's Creek Downstream	BOD5	2	mg/L	200
27/04/2017	King's Creek Downstream	BOD5	6	mg/L	200
3/05/2017	King's Creek Downstream	BOD5	15	mg/L	200
11/05/2017	King's Creek Downstream	BOD5	8	mg/L	200
18/05/2017	King's Creek Downstream	BOD5	14	mg/L	200
25/05/2017	King's Creek Downstream	BOD5	12	mg/L	200
8/06/2017	King's Creek Downstream	BOD5	7	mg/L	200
9/03/2017	King's Creek Release Point	BOD5	13	mg/L	200
23/03/2017	King's Creek Release Point	BOD5	13	mg/L	200
28/03/2017	King's Creek Release Point	BOD5	24	mg/L	200
4/04/2017	King's Creek Release Point	BOD5	21	mg/L	200
19/04/2017	King's Creek Release Point	BOD5	7	mg/L	200
27/04/2017	King's Creek Release Point	BOD5	27	mg/L	200
3/05/2017	King's Creek Release Point	BOD5	41	mg/L	200
11/05/2017	King's Creek Release Point	BOD5	37	mg/L	200
18/05/2017	King's Creek Release Point	BOD5	32	mg/L	200
25/05/2017	King's Creek Release Point	BOD5	62	mg/L	200
8/06/2017	King's Creek Release Point	BOD5	28	mg/L	200
9/03/2017	King's Creek Upstream	BOD5	3	mg/L	200
23/03/2017	King's Creek Upstream	BOD5	2	mg/L	200
28/03/2017	King's Creek Upstream	BOD5	3	mg/L	200
4/04/2017	King's Creek Upstream	BOD5	2	mg/L	200
19/04/2017	King's Creek Upstream	BOD5	2	mg/L	200
27/04/2017	King's Creek Upstream	BOD5	2	mg/L	200
3/05/2017	King's Creek Upstream	BOD5	2	mg/L	200
11/05/2017	King's Creek Upstream	BOD5	2	mg/L	200
18/05/2017	King's Creek Upstream	BOD5	3	mg/L	200
25/05/2017	King's Creek Upstream	BOD5	4	mg/L	200
8/06/2017	King's Creek Upstream	BOD5	2	mg/L	200

Note: Results marked red are results obtained without full QC compliance
Note: "<" have been removed from the data for graphing purposes.



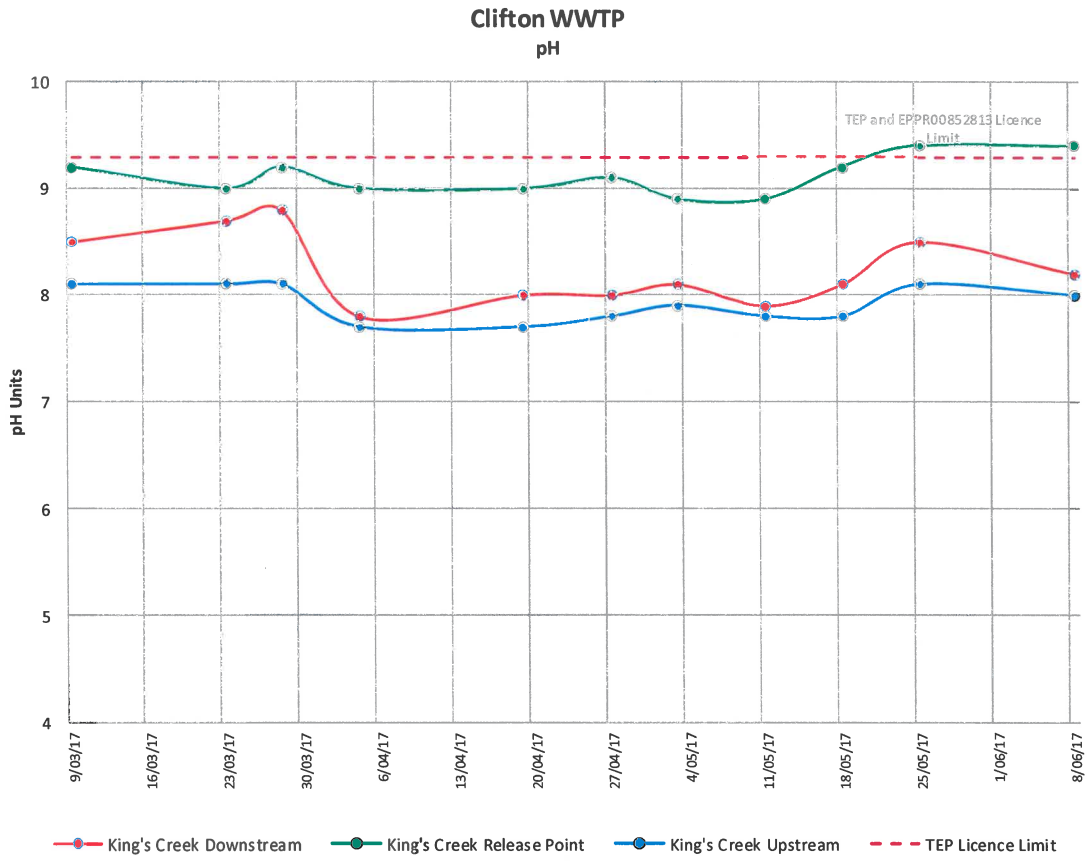
Graph 2-Suspended Solids

Clifton WWTP					
Reg. Date	Sample Description	Test	Result-<	Units	Licence Limit
9/03/2017	King's Creek Downstream	SS	28	mg/L	400
23/03/2017	King's Creek Downstream	SS	53	mg/L	400
28/03/2017	King's Creek Downstream	SS	77	mg/L	400
4/04/2017	King's Creek Downstream	SS	139	mg/L	400
19/04/2017	King's Creek Downstream	SS	16	mg/L	400
27/04/2017	King's Creek Downstream	SS	37	mg/L	400
3/05/2017	King's Creek Downstream	SS	52	mg/L	400
11/05/2017	King's Creek Downstream	SS	28	mg/L	400
18/05/2017	King's Creek Downstream	SS	45	mg/L	400
25/05/2017	King's Creek Downstream	SS	41	mg/L	400
8/06/2017	King's Creek Downstream	SS	35	mg/L	400
9/03/2017	King's Creek Release Point	SS	39	mg/L	400
23/03/2017	King's Creek Release Point	SS	44	mg/L	400
28/03/2017	King's Creek Release Point	SS	52	mg/L	400
4/04/2017	King's Creek Release Point	SS	35	mg/L	400
19/04/2017	King's Creek Release Point	SS	23	mg/L	400
27/04/2017	King's Creek Release Point	SS	75	mg/L	400
3/05/2017	King's Creek Release Point	SS	67	mg/L	400
11/05/2017	King's Creek Release Point	SS	72	mg/L	400
18/05/2017	King's Creek Release Point	SS	118	mg/L	400
25/05/2017	King's Creek Release Point	SS	113	mg/L	400
8/06/2017	King's Creek Release Point	SS	93	mg/L	400
9/03/2017	King's Creek Upstream	SS	26	mg/L	400
23/03/2017	King's Creek Upstream	SS	26	mg/L	400
28/03/2017	King's Creek Upstream	SS	42	mg/L	400
4/04/2017	King's Creek Upstream	SS	141	mg/L	400
19/04/2017	King's Creek Upstream	SS	12	mg/L	400
27/04/2017	King's Creek Upstream	SS	20	mg/L	400
3/05/2017	King's Creek Upstream	SS	22	mg/L	400
11/05/2017	King's Creek Upstream	SS	11	mg/L	400
18/05/2017	King's Creek Upstream	SS	16	mg/L	400
25/05/2017	King's Creek Upstream	SS	22	mg/L	400
8/06/2017	King's Creek Upstream	SS	27	mg/L	400



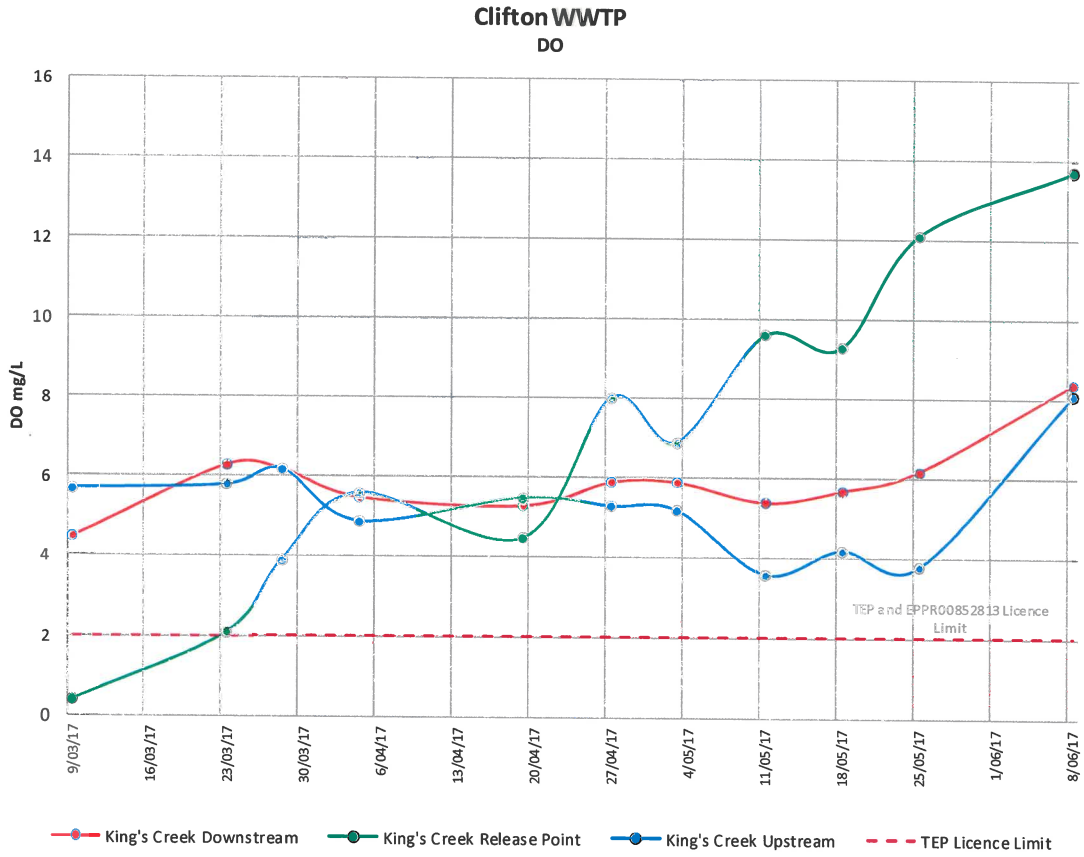
Graph 3-pH

Clifton WWTP					
Reg. Date	Sample Description	Test	Result-<	Units	Licence Limit
9/03/2017	King's Creek Downstream	PH	8.5	UNITS	9.3
23/03/2017	King's Creek Downstream	PH	8.7	UNITS	9.3
28/03/2017	King's Creek Downstream	PH	8.8	UNITS	9.3
4/04/2017	King's Creek Downstream	PH	7.8	UNITS	9.3
19/04/2017	King's Creek Downstream	PH	8.0	UNITS	9.3
27/04/2017	King's Creek Downstream	PH	8.0	UNITS	9.3
3/05/2017	King's Creek Downstream	PH	8.1	UNITS	9.3
11/05/2017	King's Creek Downstream	PH	7.9	UNITS	9.3
18/05/2017	King's Creek Downstream	PH	8.1	UNITS	9.3
25/05/2017	King's Creek Downstream	PH	8.5	UNITS	9.3
8/06/2017	King's Creek Downstream	PH	8.2	UNITS	9.3
9/03/2017	King's Creek Release Point	PH	9.2	UNITS	9.3
23/03/2017	King's Creek Release Point	PH	9.0	UNITS	9.3
28/03/2017	King's Creek Release Point	PH	9.2	UNITS	9.3
4/04/2017	King's Creek Release Point	PH	9.0	UNITS	9.3
19/04/2017	King's Creek Release Point	PH	9.0	UNITS	9.3
27/04/2017	King's Creek Release Point	PH	9.1	UNITS	9.3
3/05/2017	King's Creek Release Point	PH	8.9	UNITS	9.3
11/05/2017	King's Creek Release Point	PH	8.9	UNITS	9.3
18/05/2017	King's Creek Release Point	PH	9.2	UNITS	9.3
25/05/2017	King's Creek Release Point	PH	9.4	UNITS	9.3
8/06/2017	King's Creek Release Point	PH	9.4	UNITS	9.3
9/03/2017	King's Creek Upstream	PH	8.1	UNITS	9.3
23/03/2017	King's Creek Upstream	PH	8.1	UNITS	9.3
28/03/2017	King's Creek Upstream	PH	8.1	UNITS	9.3
4/04/2017	King's Creek Upstream	PH	7.7	UNITS	9.3
19/04/2017	King's Creek Upstream	PH	7.7	UNITS	9.3
27/04/2017	King's Creek Upstream	PH	7.8	UNITS	9.3
3/05/2017	King's Creek Upstream	PH	7.9	UNITS	9.3
11/05/2017	King's Creek Upstream	PH	7.8	UNITS	9.3
18/05/2017	King's Creek Upstream	PH	7.8	UNITS	9.3
25/05/2017	King's Creek Upstream	PH	8.1	UNITS	9.3
8/06/2017	King's Creek Upstream	PH	8	UNITS	9.3



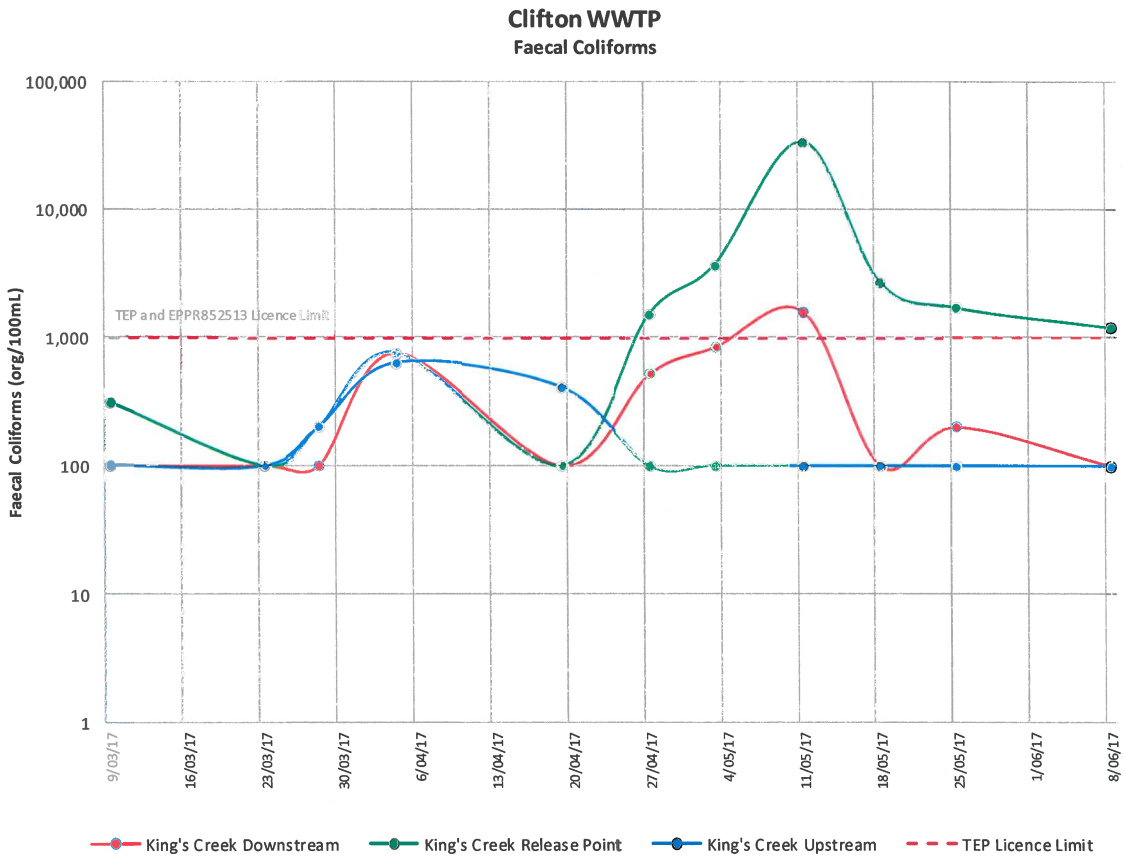
Graph 4-Dissolved Oxygen

Clifton WWTP					
Reg. Date	Sample Description	Test	Result-<	Units	Licence Limit
9/03/2017	King's Creek Downstream	DO	4.5	mg/L	2.0
23/03/2017	King's Creek Downstream	DO	6.3	mg/L	2.0
28/03/2017	King's Creek Downstream	DO	6.2	mg/L	2.0
4/04/2017	King's Creek Downstream	DO	5.5	mg/L	2.0
19/04/2017	King's Creek Downstream	DO	5.3	mg/L	2.0
27/04/2017	King's Creek Downstream	DO	5.9	mg/L	2.0
3/05/2017	King's Creek Downstream	DO	5.9	mg/L	2.0
11/05/2017	King's Creek Downstream	DO	5.4	mg/L	2.0
18/05/2017	King's Creek Downstream	DO	5.7	mg/L	2.0
25/05/2017	King's Creek Downstream	DO	6.2	mg/L	2.0
8/06/2017	King's Creek Downstream	DO	8.4	mg/L	2.0
9/03/2017	King's Creek Release Point	DO	0.4	mg/L	2.0
23/03/2017	King's Creek Release Point	DO	2.1	mg/L	2.0
28/03/2017	King's Creek Release Point	DO	3.9	mg/L	2.0
4/04/2017	King's Creek Release Point	DO	5.6	mg/L	2.0
19/04/2017	King's Creek Release Point	DO	4.5	mg/L	2.0
27/04/2017	King's Creek Release Point	DO	8.0	mg/L	2.0
3/05/2017	King's Creek Release Point	DO	6.9	mg/L	2.0
11/05/2017	King's Creek Release Point	DO	9.6	mg/L	2.0
18/05/2017	King's Creek Release Point	DO	9.3	mg/L	2.0
25/05/2017	King's Creek Release Point	DO	12	mg/L	2.0
8/06/2017	King's Creek Release Point	DO	13.7	mg/L	2.0
9/03/2017	King's Creek Upstream	DO	5.7	mg/L	2.0
23/03/2017	King's Creek Upstream	DO	5.8	mg/L	2.0
28/03/2017	King's Creek Upstream	DO	6.2	mg/L	2.0
4/04/2017	King's Creek Upstream	DO	4.9	mg/L	2.0
19/04/2017	King's Creek Upstream	DO	5.5	mg/L	2.0
27/04/2017	King's Creek Upstream	DO	5.3	mg/L	2.0
3/05/2017	King's Creek Upstream	DO	5.2	mg/L	2.0
11/05/2017	King's Creek Upstream	DO	3.6	mg/L	2.0
18/05/2017	King's Creek Upstream	DO	4.2	mg/L	2.0
25/05/2017	King's Creek Upstream	DO	3.8	mg/L	2.0
8/06/2017	King's Creek Upstream	DO	8.1	mg/L	2.0



Graph 5-Faecal Coliforms

Clifton WWTP					
Reg. Date	Sample Description	Test	Result-<	Units	Licence Limit
9/03/2017	King's Creek Downstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
23/03/2017	King's Creek Downstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
28/03/2017	King's Creek Downstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
4/04/2017	King's Creek Downstream	COLI-FAECAL-MPN	750	MPN/100 mL	1000
19/04/2017	King's Creek Downstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
27/04/2017	King's Creek Downstream	COLI-FAECAL-MPN	520	MPN/100 mL	1000
3/05/2017	King's Creek Downstream	COLI-FAECAL-MPN	850	MPN/100 mL	1000
11/05/2017	King's Creek Downstream	COLI-FAECAL-MPN	1600	MPN/100 mL	1000
18/05/2017	King's Creek Downstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
25/05/2017	King's Creek Downstream	COLI-FAECAL-MPN	200	MPN/100 mL	1000
8/06/2017	King's Creek Downstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
9/03/2017	King's Creek Release Point	COLI-FAECAL-MPN	310	MPN/100 mL	1000
23/03/2017	King's Creek Release Point	COLI-FAECAL-MPN	100	MPN/100 mL	1000
28/03/2017	King's Creek Release Point	COLI-FAECAL-MPN	200	MPN/100 mL	1000
4/04/2017	King's Creek Release Point	COLI-FAECAL-MPN	750	MPN/100 mL	1000
19/04/2017	King's Creek Release Point	COLI-FAECAL-MPN	100	MPN/100 mL	1000
27/04/2017	King's Creek Release Point	COLI-FAECAL-MPN	1500	MPN/100 mL	1000
3/05/2017	King's Creek Release Point	COLI-FAECAL-MPN	3700	MPN/100 mL	1000
11/05/2017	King's Creek Release Point	COLI-FAECAL-MPN	34000	MPN/100 mL	1000
18/05/2017	King's Creek Release Point	COLI-FAECAL-MPN	2700	MPN/100 mL	1000
25/05/2017	King's Creek Release Point	COLI-FAECAL-MPN	1700	MPN/100 mL	1000
8/06/2017	King's Creek Release Point	COLI-FAECAL-MPN	1200	MPN/100 mL	1000
9/03/2017	King's Creek Upstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
23/03/2017	King's Creek Upstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
28/03/2017	King's Creek Upstream	COLI-FAECAL-MPN	200	MPN/100 mL	1000
4/04/2017	King's Creek Upstream	COLI-FAECAL-MPN	630	MPN/100 mL	1000
19/04/2017	King's Creek Upstream	COLI-FAECAL-MPN	410	MPN/100 mL	1000
27/04/2017	King's Creek Upstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
3/05/2017	King's Creek Upstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
11/05/2017	King's Creek Upstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
18/05/2017	King's Creek Upstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
25/05/2017	King's Creek Upstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000
8/06/2017	King's Creek Upstream	COLI-FAECAL-MPN	100	MPN/100 mL	1000



Attachment #3
Photographs

Photograph 1 - Lagoon 4- Rainfall delayed drying of sludge. (Excavation expected to commence July 2017)



Photograph 2 - Lagoon 3- Current discharge lagoon with floating wetland system removed from Lagoon 4



Photograph 3 – Removal of bank between Lagoon3 and Lagoon 4 to remove floating wetland (Reinstated 18-5-2017)

