

LORIS H HASSALL TRADING PTY LTD – FORBES



ANNUAL PERFORMANCE SYSTEM REPORT 2017

EPL # 12765

REPORTING PERIOD:

12-NOV-2016 to 11-NOV-2017

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1. TABLE OF CONTENT

**EPA MONITORING REFQUENCY REQUIRED AND UNITS OF MEASURE TO BE
TAKEN**

SOIL SAMPLING SITES

POINT 1: IRRIGATION PIT SUMMARY OF RESULTS

POINT 2 & 5: EVAPORATION DAMS 1 + 2 SUMMARY OF RESULTS

POINT 3: PIEZOMETERS SUMMARY OF RESULTS

POINT 4: SOIL SAMPLE SUMMARY OF RESULTS

LITRES IRRIGATED

MAP OF 5 MONITORING POINTS

EPA MONITORING FREQUENCY

POINT 1,2,5				
	Pollutant	Units of measure	Frequency	Sampling Method
<u>1</u>	CONDUCTIVITY	microsiemens per centimetre	Quarterly	In situ
<u>2</u>	p H	p H	Quarterly	In situ
<u>3</u>	NITROGEN (total)	milligrams per litre	Quarterly	Grab Sample
<u>4</u>	PHOSPHORUS (total)	milligrams per litre	Quarterly	Grab Sample
<u>5</u>	SODIUM	milligrams per litre	Quarterly	Grab Sample
<u>6</u>	POTASSIUM	milligrams per litre	Quarterly	Grab Sample
<u>7</u>	BOD	milligrams per litre	Quarterly	Grab Sample
<u>8</u>	OIL AND GREASE	milligrams per litre	Quarterly	Grab Sample
<u>9</u>	Chloride	milligrams per litre	Quarterly	Grab Sample
<u>10</u>	Calcium	milligrams per litre	Quarterly	Grab Sample
<u>11</u>	MAGNESIUM	milligrams per litre	Quarterly	Grab Sample
<u>12</u>	SODIUM ABSORPTION RATIO	sodium absorption ratio	Quarterly	Grab Sample

POINT 3				
	Pollutant	Units of measure	Frequency	Sampling Method
<u>1</u>	STANDING WATER LEVEL	metres	Quarterly	In situ
<u>2</u>	NITROGEN (total)	milligrams per litre	Quarterly	Grab Sample
<u>3</u>	PHOSPHORUS (total)	milligrams per litre	Quarterly	Grab Sample
<u>4</u>	CONDUCTIVITY	microsiemens per centimetre	Quarterly	In situ
<u>5</u>	p H	p H	Quarterly	In situ

POINT 4				
	Pollutant	Units of measure	Frequency	Sampling Method
<u>1</u>	AVAILABLE PHOSPHORUS	milligrams per kilogram	Yearly	Speical Method 1
<u>2</u>	Exchangeable sodium %	percent	Yearly	Speical Method 1
<u>3</u>	CONDUCTIVITY	microsiemens per centimetre	Yearly	Speical Method 1
<u>4</u>	NITRATE	milligrams per litre	Yearly	Speical Method 1
<u>5</u>	p H	p H	Yearly	Speical Method 1
<u>6</u>	NITROGEN (total)	milligrams per kilogram	Yearly	Speical Method 1
<u>7</u>	CALCIUM	milligrams per litre	Yearly	Speical Method 1
<u>8</u>	MAGNESIUM	milligrams per litre	Yearly	Speical Method 1
<u>9</u>	SODIUM ABSORPTION RATIO	sodium absorption ratio	Yearly	Speical Method 1

POINT 1 =- IRRIGATION PIT

TURN ON AND SAMPLE IS COLLECTED AT BOTTOM OF PIT. TIP PART INTO EACH BOTTLE.
 REPEAT EVERY 1/2 HOUR UNTIL SESL BOTTLES ARE FULL

POINT 2 & 5 = EVAP DAMS.

TAKE SAMPLE FROM DEEP AS POSSIBLE , TIP PART INTO EACH BOTTLE.
 REPEAT AT HALF DEPTH AND THEN JUST BELOW SURFACE UNTIL SESL BOTTLES ARE FULL, SEAL AND LABEL

COMPOSITE SOIL POINT 4

5 SAMPLES TO BE TAKEN
 25m2 AREA x 7 BAYS AT
 DEPTHS OF 0>10 CM +
 10>40CM
 SEAL AND LABEL

GPS SOIL SAMPLING SITES

	LAT: LONG:	-33.332066 148.064235	N0-7
	LAT: LONG:	-33.331922 148.063527	N0-6
	LAT: LONG:	-33.331797 148.062883	N0-5
	LAT: LONG:	-33.331698 148.062175	N0-4
	LAT: LONG:	-33.331627 148.061467	N0-3
	LAT: LONG:	-33.31519 148.060614	N0-2
	LAT: LONG:	-33.33142 148.060008	N0-1

LH HASSALL TRADING P/L 812 PARKES RD. FORBES NSW

APPENDIX: G

EPA REGISTER LINK:

<https://apps.epa.nsw.gov.au/prpoeoapp>

EFFLUENT ANALYSIS RECORD SHEET

LICENCE # 12765

REVISION:0

Refer NEW POINTS FOR TESTING SITE PLAN AUG-18



DATE: 30/11/2017

PUBLISHED: 11/10/2018

POINT 1 - IRRIGATION PIT							
UNIT OF MEASURE	23/01/2017	10/04/2017	23/08/2017	14/11/2017	HIGH	LOW	AVE
BOD - mg/L	4140	4570	2440	3030	4570	2440	0
Chloride - mg/L	10600	15036	3778	5160	15036	3778	8644
Total Kjeldahl Nitrogen - mg/L	718	478	768	562	768	478	632
Oil & Grease (LLE) - mg/L	77	32	17	42	77	17	14.5
Total Phosphorus - mg/L	34.8	34	29	20.1	34.8	20.1	29
Potassium mg/L	163	220	162	175	220	162	180
Conductivity -microsiemens/per cm	39600	46000	16900	16690	46000	16690	39730
Sodium - mg/L	5440	10559	2579	3530	10559	2579	5527
(Ph)	7.83	10.79	11.7	11.79	11.79	7.83	10.5
Calcium - mg/L	179	31	119	244	244	31	191
Magnesium - mg/L	30.4	2	1.35	1	30.4	1	11.6
Sodium Absorption Ratio	99	500	64	105	500	64	256

DATE TAKEN:

TIME TAKE:

TAKEN BY:

SESL REPORT:

23/01/2017	10/04/2017	16/08/2017	14/11/2017
7.30AM	7.15 AM	7.30 AM	7.30 AM
MARK	MARK	MARK	MARK
6/02/2017	3/05/2017	5/09/2017	28/11/2017

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EPA REGISTER LINK:

<https://apps.epa.nsw.gov.au/prpoeoapp>

EVAPORATION DAM MONITORING RECORD

LICENCE # : LICENCE # 12765

REVISION:0

Refer **NEW POINTS FOR TESTING SITE PLAN AUG-18**

DATE: 1-Dec PUBLISHED: 11/10/2018

APPENDIX C



POINT 2 - EVAPORATION DAM					SML LINED		
UNIT OF MEASURE	23/01/2017	19/04/2017	23/08/2017	15/11/2017	HIGH	LOW	AVE
BOD - mg/L	11100	7000	6730	13800	13800	6730	9658
Chloride - mg/L	202000	98346	144946	186000	202000	98346	157823
Total Kjeldahl Nitrogen - mg/L	1160	948	399	2040	2040	399	1137
Oil & Grease (LLE) - mg/L	20	39	133	43	133	20	59
Total Phosphorus - mg/L	206	188	199	387	387	188	245
Potassium mg/L	1730	843	1229	3230	3230	843	1758
Conductivity -microsiemens/per cm	510000	334000	475000	534000	534000	334000	617667
Sodium - mg/L	102000	56539	85609	104000	104000	56539	87037
(Ph)	6.83	6.61	6.88	6.64	6.88	6.61	7
Calcium - mg/L	151	65	1229	145	1229	65	530
Magnesium - mg/L	116	44	63	152	152	44	125
Sodium Absorption Ratio	1522	1331	1835	1750	1835	1331	2146

DATE TAKEN:

TIME TAKE:

TAKEN BY:

SESL REPORT:

23/01/2017	19/04/2017	23/08/2017	15/11/2017
8:00 AM	7.15 am	7.30 am	7.30 am
MARK	MARK	MARK	MARK
6/02/2017	3/05/2017	5/09/2017	28/11/2017

POINT 5 - EVAPORATION DAM					LGE LINED		
UNIT OF MEASURE	23/01/2017	19/04/2017	23/08/2017	15/11/2017	HIGH	LOW	AVE
BOD - mg/L	18200	17100	16000	9250	18200	9250	15138
Chloride - mg/L	204000	95104	173656	187000	204000	95104	164940
Total Kjeldahl Nitrogen - mg/L	1350	1530	2680	1240	2680	1240	1700
Oil & Grease (LLE) - mg/L	18	16	64	26	64	26	31
Total Phosphorus - mg/L	200	252	360	404	404	200	304
Potassium mg/L	2820	2530	3712	6110	6110	2530	3793
Conductivity -microsiemens/per cm	510000	282000	570000	555000	570000	282000	639000
Sodium - mg/L	101000	48455	100787	103000	103000	48455	88311
(Ph)	6.68	6.46	7.06	6.42	7.06	6.42	7
Calcium - mg/L	170	73	74.9	120	170	73	146
Magnesium - mg/L	119	56	95	200	200	56	157
Sodium Absorption Ratio	1455	1040	1827	1650	1827	1040	1991

DATE TAKEN:

TIME TAKE:

TAKEN BY:

SESL REPORT:

23/01/2017	19/04/2017	23/08/2017	15/11/2017
8.30 am	7.30 am	8:00 AM	8:00 AM
MARK	MARK	MARK	MARK
6/02/2017	3/05/2017	5/09/2017	28/11/2017

LH HASSALL TRADING P/L 812 PARKES RD. FORBES NSW

EPA REGISTER LINK:

<https://apps.epa.nsw.gov.au/ncr0000000>

PIEZOMETER ANALYSIS RECORD

LICENCE # 12765

REVISION: 0

PUBLISHED:

11/10/2018

1/12/2017



POINT 3 - PIZOMETERS

ANALYSIS	PIEZOMETER 1					PIEZOMETER 2				
	Mar-17	Sep-17	HIGH	LOW	AVE	Mar-17	Sep-17	HIGH	LOW	AVE
Chromium Total - mg/L										
Electrical Conductivity - µS/m										
Nitrogen Total - mg/L										
pH - pH units										
Phosphorus Total - mg/L										
Redox Potential										
Standing Water Level - m										
Sulphide - mg/L										
ANALYSIS	PIEZOMETER 3					PIEZOMETER 4				
	Mar-17	Sep-17	HIGH	LOW	AVE	Mar-17	Sep-17	HIGH	LOW	AVE
Chromium Total - mg/L										
Electrical Conductivity - µS/m										
Nitrogen Total - mg/L										
pH - pH units										
Phosphorus Total - mg/L										
Redox Potential										
Standing Water Level - m										
Sulphide Total = mg/L										
ANALYSIS	PIEZOMETER 5					PIEZOMETER 6				
	Mar-17	Sep-17	HIGH	LOW	AVE	Mar-17	Sep-17	HIGH	LOW	AVE
Chromium Total - mg/L										
Electrical Conductivity - µS/m										
Nitrogen Total - mg/L										
pH - pH units										
Phosphorus Total - mg/L										
Redox Potential										
Standing Water Level - m										
Sulphide Total = mg/L										

DATE TAKEN:
 TIME TAKE:
 TAKEN BY:
 SESL REPORT:

4/03/2017	26/09/2017
10:00 AM	11:00 AM
MARK	MARK
NA	NA

LH HASSALL TRADING P/L 812 PARKES RD. FORBES NSW

EPA REGISTER LINK:

<https://www.epa.nsw.gov.au/irrigation>

EFFLUENT IRRIGATED POINT 1

LICENCE # 12765

2016/2017

REVISION: 0

Refer **NEW POINTS FOR TESTING SITE PLAN AUG-18**

DATE: **30/11/2017**

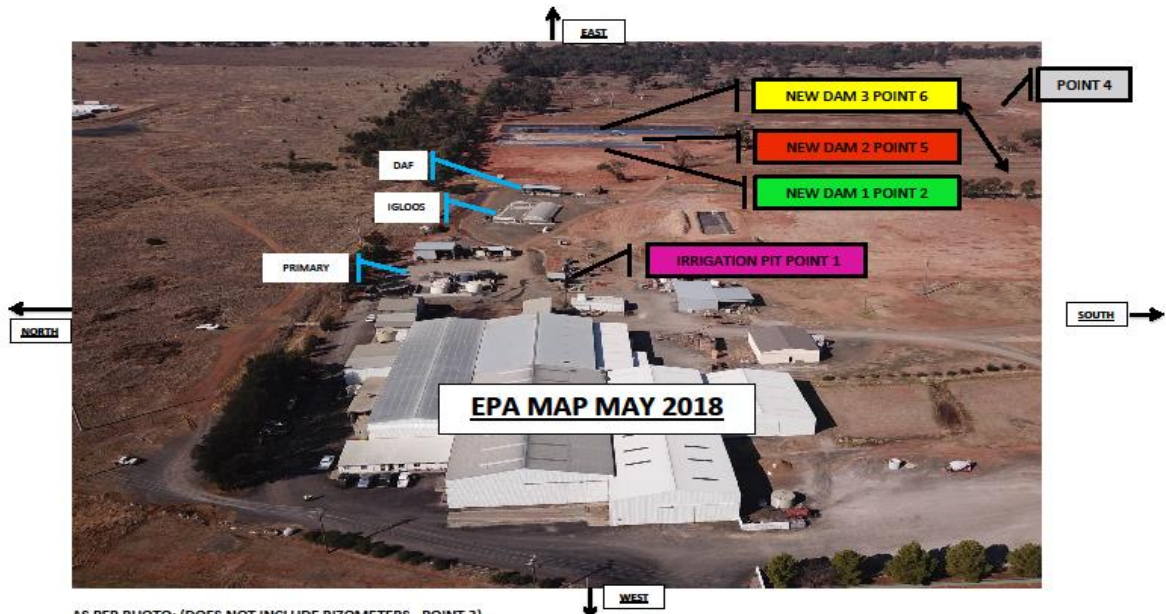
PUBLISHED: **??**



2016/2017

RECORDS DONE DAILY BY WHO EVER
 IS IN CHARGE TO DO IRRIGATING.
 REFER IRRIGATION RECORD SHEETS
 KEPT IN OFFICE.

Lfs	kilo/lts	No of days	low	kilo/lts	high	kilo/lts
511860	511.86	7	57169	57.169	114923	114.923
547014	547.014	7	59564	59.564	86656	86.656
612281	612.281	7	48665	48.665	105993	105.993
428925	428.925	7	52726	52.726	146660	146.66
527162	527.162	7	48265	48.265	105368	105.368
534789	534.789	7	53695	53.695	112563	112.563
531515	531.515	7	42315	42.315	95633	95.633
385440	385.44	7	38562	38.562	85632	85.632
415674	415.674	7	48562	48.562	96215	96.215
437722	437.722	7	49251	49.251	57452	57.452
431557	431.557	7	46532	46.532	75632	75.632
675804	675.804	7	58658	58.658	85663	85.663
321192	321.192	7	42698	42.698	52678	52.678
341179	341.179	7	46589	46.589	68574	68.574
462630	462.63	7	42658	42.658	56365	56.365
474912	474.912	7	41999	41.999	52698	52.698
436506	436.506	7	46255	46.255	51999	51.999
452130	452.13	7	43578	43.578	49688	49.688
531658	531.658	7	54263	54.263	89567	89.567
454131	454.131	7	45897	45.897	93568	93.568
447456	447.456	7	51879	51.879	98563	98.563
474109	474.109	7	52988	52.988	86351	86.351
351848	351.848	7	38698	38.698	102555	102.555
455681	455.681	7	48952	48.952	98256	98.256
352237	352.237	7	38598	38.598	92114	92.114
393772	393.772	7	49666	49.666	89666	89.666
365445	365.445	7	52698	52.698	96877	96.877
426066	426.066	7	51268	51.268	85693	85.693
528152	528.152	7	49633	49.633	98563	98.563
471788	471.788	7	51225	51.225	105685	105.685
481254	481.254	7	49566	49.566	95236	95.236
617617	617.617	7	52669	52.669	125693	125.693
	kilo/lts					
Total Lfs	14,879,506	224				
No. times irrigated	224					
Av: Lfs	66426.4					



AS PER PHOTO: (DOES NOT INCLUDE PIZOMETERS= POINT 3)

- | | | | |
|----------|---------------------------------------|----------|-------------------------|
| #POINT 1 | IRRIGATION PIT | #POINT 2 | NEW DAM 1 |
| #POINT 3 | PIEZOMETERS x 6 = POINT 3 (NOT SHOWN) | #POINT 4 | IRRIGATION BLOCK = SOIL |
| #POINT 5 | NEW DAM 2 | #POINT 6 | NEW DAM 3 |

Council Lot Numbers

LORIS. H. HASSALLS TRADING - FORBES

APPENDIX: 1

