

LORIS H HASSALL TRADING PTY LTD – FORBES



LABORATORY RESULTS / SITE PLAN 2019

EPL # 12765

REPORTING PERIOD:

18-DEC-2018 to 18-DEC-2019

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LITRES IRRIGATED TO BE DONE END OF YEAR

POINT 2,5,6, LITRES TO DAMS TO BE DONE END OF YEAR

ANNUAL ANALYSIS: R1.8 2017/2018 TO BE DONE END OF YEAR

AERIAL PHOTO + MAP OF 6 MONITORING POINTS

EPA MONITORING FREQUENCY

POINT 1,2,5,6

| | Pollutant | Units of measure | Frequency | Sampling Method |
|-----------|-------------------------|-----------------------------|-----------|-----------------|
| <u>1</u> | BOD | milligrams per litre | Quarterly | Grab Sample |
| <u>2</u> | Calcium | milligrams per litre | Quarterly | Grab Sample |
| <u>3</u> | Chloride | milligrams per litre | Quarterly | Grab Sample |
| <u>4</u> | CONDUCTIVITY | microsiemens per centimetre | Quarterly | In situ |
| <u>5</u> | MAGNESIUM | milligrams per litre | Quarterly | Grab Sample |
| <u>6</u> | NITROGEN (total) | milligrams per litre | Quarterly | Grab Sample |
| <u>7</u> | OIL AND GREASE | milligrams per litre | Quarterly | Grab Sample |
| <u>8</u> | p H | p H | Quarterly | In situ |
| <u>9</u> | PHOSPHORUS (total) | milligrams per litre | Quarterly | Grab Sample |
| <u>10</u> | POTASSIUM | milligrams per litre | Quarterly | Grab Sample |
| <u>11</u> | SODIUM | 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> | CONDUCTIVITY | microsiemens per centimetre | Quarterly | In situ |
| <u>2</u> | NITROGEN (total) | milligrams per litre | Quarterly | Grab Sample |
| <u>3</u> | p H | p H | Quarterly | In situ |
| <u>4</u> | PHOSPHORUS (total) | milligrams per litre | Quarterly | Grab Sample |
| <u>5</u> | STANDING WATER LEVEL | metres | 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> | CALCIUM | milligrams per litre | Yearly | Speical Method 1 |
| <u>3</u> | CONDUCTIVITY | microsiemens per centimetre | Yearly | Speical Method 1 |
| <u>4</u> | Exchangeable sodium % | percent | Yearly | Speical Method 1 |
| <u>5</u> | MAGNESIUM | milligrams per litre | Yearly | Speical Method 1 |
| <u>6</u> | NITRATE | milligrams per litre | Yearly | Speical Method 1 |
| <u>7</u> | NITROGEN (total) | milligrams per kilogram | Yearly | Speical Method 1 |
| <u>8</u> | p H | p H | 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 & 6 = 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: | 7 | -33.332066 148.064235 | N0-7 |
| | LAT: LONG: | 6 | -33.331922 148.063527 | N0-6 |
| | LAT: LONG: | 5 | -33.331797 148.062883 | N0-5 |
| | LAT: LONG: | 4 | -33.331698 148.062175 | N0-4 |
| | LAT: LONG: | 3 | -33.331627 148.061467 | N0-3 |
| | LAT: LONG: | 2 | -33.31519 148.060614 | N0-2 |
| | LAT: LONG: | 1 | -33.33142 148.060008 | N0-1 |

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

EPA REGISTER LINK:

<https://apps.epa.nsw.gov.au/nrmp000000>

EFFLUENT ANALYSIS RECORD SHEET

LICENCE # 12765

REVISION:0

Refer NEW POINTS FOR TESTING SITE PLAN AUG-18



DATE: 3-Mar

PUBLISHED: 6/03/2019

| POINT 1 - IRRIGATION PIT | | | | | | | |
|-----------------------------------|------------|-----------|-----------|-----------|------|-----|------|
| UNIT OF MEASURE | 11/02/2019 | 0/01/1900 | 0/01/1900 | 0/01/1900 | HIGH | LOW | AVE |
| BOD - mg/L | 2060 | 0 | 0 | 0 | 0 | 0 | 2060 |
| Chloride - mg/L | 1401 | 0 | 0 | 0 | 0 | 0 | 1401 |
| Total Kjeldahl Nitrogen - mg/L | 335 | 0 | 0 | 0 | 0 | 0 | 335 |
| Oil & Grease (LLE) - mg/L | 26 | 0 | 0 | 0 | 0 | 0 | 26 |
| Total Phosphorus - mg/L | 13.6 | 0 | 0 | 0 | 0 | 0 | 14 |
| Potassium mg/L | 67.6 | 0 | 0 | 0 | 0 | 0 | 68 |
| Conductivity -microsiemens/per cm | 4450 | 0 | 0 | 0 | 0 | 0 | 4450 |
| Sodium - mg/L | 744 | 0 | 0 | 0 | 0 | 0 | 744 |
| (Ph) | 11.94 | 0 | 0 | 0 | 0 | 0 | 12 |
| Calcium - mg/L | 43 | 0 | 0 | 0 | 0 | 0 | 43 |
| Magnesium - mg/L | 0.04 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sodium Absorption Ratio | 31 | 0 | 0 | 0 | 0 | 0 | 31 |

DATE TAKEN:

TIME TAKE:

TAKEN BY:

SESL REPORT:

| 11/02/2019 | 0/01/1900 | 0/01/1900 | 0/01/1900 |
|------------|-----------|-----------|-----------|
| 10.30AM | | | |
| MARK | | | |
| 22/02/2019 | | | |

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

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

EVAPORATION DAM MONITORING RECORD

LICENCE #: LICENCE # 12765

REVISIONS

Refer NEW POINTS FOR TESTING SITE PLAN AUG-18

DATE: 3/03/2019 PUBLISHED: 6/03/2019

APPENDIX C



| POINT 2 - EVAPORATION DAM 1 | | | | | | | |
|-----------------------------------|------------|-----------|-----------|-----------|---------|-----|--------|
| UNIT OF MEASURE | 11/02/2019 | | | | 1st sml | | AVE |
| | 0/01/1900 | 0/01/1900 | 0/01/1900 | 0/01/1900 | HIGH | LOW | |
| BOD - mg/L | 7050 | 0 | 0 | 0 | 0 | 0 | 7050 |
| Chloride - mg/L | 160585 | 0 | 0 | 0 | 0 | 0 | 160585 |
| Total Kjeldahl Nitrogen - mg/L | 1460 | 0 | 0 | 0 | 0 | 0 | 1460 |
| Oil & Grease (LLE) - mg/L | 10 | 0 | 0 | 0 | 0 | 0 | 10 |
| Total Phosphorus - mg/L | 93.3 | 0 | 0 | 0 | 0 | 0 | 93 |
| Potassium mg/L | 1050 | 0 | 0 | 0 | 0 | 0 | 1050 |
| Conductivity -microsiemens/per cm | 516000 | 0 | 0 | 0 | 0 | 0 | 516000 |
| Sodium - mg/L | 93640 | 0 | 0 | 0 | 0 | 0 | 93640 |
| (Ph) | 6.7 | 0 | 0 | 0 | 0 | 0 | 7 |
| Calcium - mg/L | -1 | 0 | 0 | 0 | 0 | 0 | -1 |
| Magnesium - mg/L | 37 | 0 | 0 | 0 | 0 | 0 | 37 |
| Sodium Absorption Ratio | 3292 | 0 | 0 | 0 | 0 | 0 | 3292 |

DATE TAKEN:

11/02/2019 0/01/1900 0/01/1900 0/01/1900

TIME TAKE:

9.05AM

TAKEN BY:

MARK

SESL REPORT:

22/02/2019

| POINT 5 - EVAPORATION DAM 2 | | | | | | | |
|-----------------------------------|------------|-----------|-----------|-----------|---------|-----|--------|
| UNIT OF MEASURE | 11/02/2019 | | | | 2nd sml | | AVE |
| | 0/01/1900 | 0/01/1900 | 0/01/1900 | 0/01/1900 | HIGH | LOW | |
| BOD - mg/L | 4420 | 0 | 0 | 0 | 0 | 0 | 4420 |
| Chloride - mg/L | 170024 | 0 | 0 | 0 | 0 | 0 | 170024 |
| Total Kjeldahl Nitrogen - mg/L | 894 | 0 | 0 | 0 | 0 | 0 | 894 |
| Oil & Grease (LLE) - mg/L | 10 | 0 | 0 | 0 | 0 | 0 | 10 |
| Total Phosphorus - mg/L | 28.2 | 0 | 0 | 0 | 0 | 0 | 28 |
| Potassium mg/L | 1240 | 0 | 0 | 0 | 0 | 0 | 1240 |
| Conductivity -microsiemens/per cm | 48700 | 0 | 0 | 0 | 0 | 0 | 48700 |
| Sodium - mg/L | 94181 | 0 | 0 | 0 | 0 | 0 | 94181 |
| (Ph) | 6.9 | 0 | 0 | 0 | 0 | 0 | 7 |
| Calcium - mg/L | 24 | 0 | 0 | 0 | 0 | 0 | 24 |
| Magnesium - mg/L | 32 | 0 | 0 | 0 | 0 | 0 | 32 |
| Sodium Absorption Ratio | 2944 | 0 | 0 | 0 | 0 | 0 | 2944 |

DATE TAKEN:

11/02/2019 0/01/1900 0/01/1900 0/01/1900

TIME TAKE:

9:00 AM

TAKEN BY:

MARK

SESL REPORT:

22/02/2019

| POINT 6 - EVAPORATION DAM 3 | | | | | | | |
|-----------------------------------|------------|-----------|-----------|-----------|---------|-----|--------|
| UNIT OF MEASURE | 11/02/2019 | | | | Big dam | | AVE |
| | 0/01/1900 | 0/01/1900 | 0/01/1900 | 0/01/1900 | HIGH | LOW | |
| BOD - mg/L | 5710 | 0 | 0 | 0 | 0 | 0 | 5710 |
| Chloride - mg/L | 94026 | 0 | 0 | 0 | 0 | 0 | 94026 |
| Total Kjeldahl Nitrogen - mg/L | 470 | 0 | 0 | 0 | 0 | 0 | 470 |
| Oil & Grease (LLE) - mg/L | 36 | 0 | 0 | 0 | 0 | 0 | 36 |
| Total Phosphorus - mg/L | 39.2 | 0 | 0 | 0 | 0 | 0 | 39 |
| Potassium mg/L | 2230 | 0 | 0 | 0 | 0 | 0 | 2230 |
| Conductivity -microsiemens/per cm | 507000 | 0 | 0 | 0 | 0 | 0 | 507000 |
| Sodium - mg/L | 166900 | 0 | 0 | 0 | 0 | 0 | 166900 |
| (Ph) | 6.9 | 0 | 0 | 0 | 0 | 0 | 7 |
| Calcium - mg/L | 30 | 0 | 0 | 0 | 0 | 0 | 30 |
| Magnesium - mg/L | 67 | 0 | 0 | 0 | 0 | 0 | 67 |
| Sodium Absorption Ratio | 2193 | 0 | 0 | 0 | 0 | 0 | 2193 |

DATE TAKEN:

11/02/2019 0/01/1900 0/01/1900 0/01/1900

TIME TAKE:

9.10 AM

TAKEN BY:

MARK

SESL REPORT:

22/02/2019

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

EPA REGISTER LINK: <https://epa.nsw.gov.au/processes>

PIEZOMETER ANALYSIS RECORD LICENCE # 12765

REVISION: 0

PUBLISHED:

6/03/2019

3/03/2019

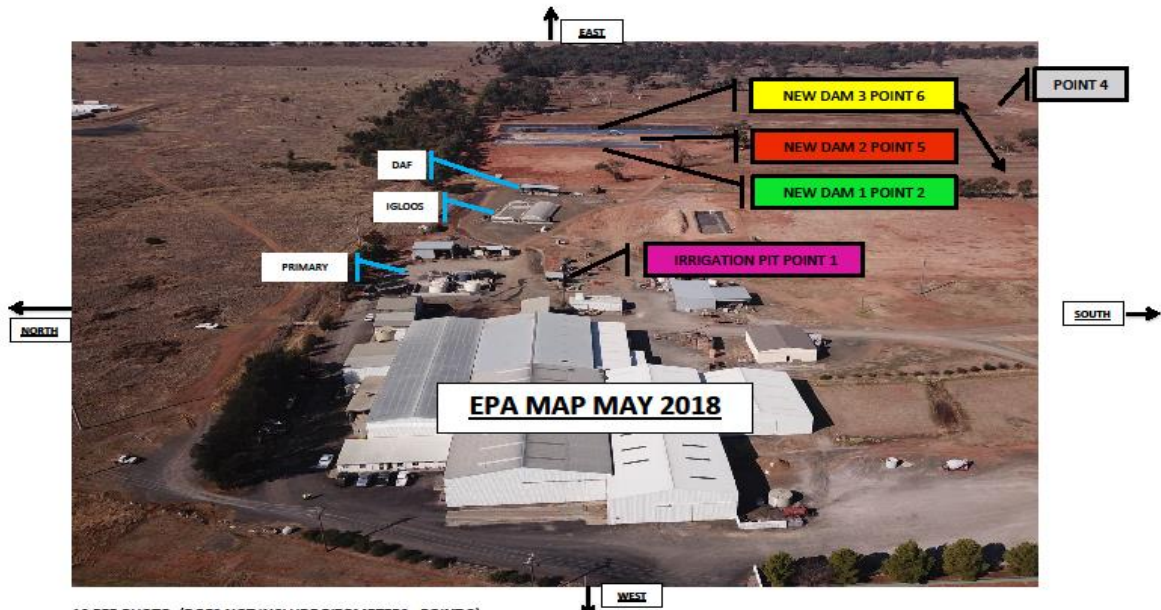


POINT 3 - PIEZOMETERS

| ANALYSIS | PIEZOMETER 1 | | | | | | | PIEZOMETER 2 | | | | | | |
|--------------------------------|--------------|--------|--------|--------|------|-----|-----|--------------|--------|--------|--------|------|-----|-----|
| | Feb-19 | Jan-00 | Jan-00 | Jan-00 | HIGH | LOW | AVE | Feb-19 | Jan-00 | Jan-00 | Jan-00 | 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 | | | | | | |
| | Feb-19 | Jan-00 | Jan-00 | Jan-00 | HIGH | LOW | AVE | Feb-19 | Jan-00 | Jan-00 | Jan-00 | 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 | | | | | | |
| | Feb-19 | Jan-00 | Jan-00 | Jan-00 | HIGH | LOW | AVE | Feb-19 | Jan-00 | Jan-00 | Jan-00 | 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:

| | | | |
|------------|--|--|--|
| 11/02/2019 | | | |
| 11AM | | | |
| MARK | | | |
| NA | | | |



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

