

20th October, 2020



Harvest Scientific Services
Environmental and Earth Science Consultants

Mr M Collins
Collins Construction Materials Pty Ltd
214 MacArthur Road
Elderslie NSW 2570

Dear Matt,

Re: Environmental Monitoring – Spring Farm: Report 2020-10

Our Ref: 201019

This is to confirm that groundwater sampling and dust monitoring at Spring Farm (see Appendix 1 for sample locations) has been carried out with the results summarised in Tables 1 and 2 respectively below.

(a) GROUNDWATER MONITORING

| TABLE 1: SUMMARY OF GROUNDWATER MONITORING RESULTS. | | | | | |
|---|-------------------------------------|-------------|-----------|---------|------|
| ANALYTE | VALUE | TARGET | DATE | TIME | TEMP |
| EC (uS/cm) | 255 (<i>Non-Saline</i>) | < 800 uS/cm | 1-10-2020 | 8.00 am | 15°C |
| pH | 6.45 (<i>Moderately alkaline</i>) | 4 – 6.50 | | | |
| Depth to Water Table (m) ¹ | 11.30 | > 10 m | | | |

Notes: 1. This value represents the depth to groundwater from the TOP OF THE STAND PIPE (670 mm above ground level); 2. Refer to **Appendix 2** for laboratory analysis results and monthly summary data 3 Refer to **Appendix 3** for quality control documentation.

The results indicate that groundwater is:

- *Non-saline* and is well below the nominated target of < 800uS/cm;
- *Moderately alkaline* and falls marginally outside the nominated pH range of 4 – 6.50;
- At the limit of the target depth > 10 m.

(b) DUST MONITORING

| TABLE 2: SUMMARY OF DUST DEPOSITION MONITORING RESULTS. | | | | | |
|---|----------|--|-------------------------------------|---------|--------------------------------------|
| SAMPLING PERIOD | LOCATION | TOTAL INSOLUBLE MATTER ¹ (G/M2/MONTH) | Ash or Mineral Content (g/m2/month) | COMMENT | EMP targets (Ash or Mineral Content) |
| September 2020 | 1 | 1.6 | NTA | Pass | ≤ 4g / m2 per month |
| | 2 | 28.3 | 26.9 | FAIL | |
| | 3 | 1.6 | NTA | Pass | |

Notes: 1.Refer to **Appendix 1** for monitoring locations. 2. Refer to **Appendix 2** for laboratory analysis results and monthly summary data. Refer to **Appendix 3** for quality control documentation.

Values at all Monitoring Stations 1 and 3 met the EMP target levels, whereas dust levels at Station 2 exceeded the EMP target. This result appears to reflect earthworks occurring very close to the station..

Yours faithfully,

Mart Rampe BSc (Applied Geology)
Principal Consultant

All Correspondence to: PO Box 427 Narellan NSW 2567
Unit 4A, 20 Somerset Avenue Narellan NSW 2567
www.harvestservices.com.au
Email: office@harvestservices.com.au
Tel: 02 4647 6177 • Mobile: 0408 677 709

APPENDIX 1: Collins Spring Farm Monitoring Locations

MS 1: Dust MS 2: Dust MS 3: Dust

GW-1: Groundwater



APPENDIX 2: Laboratory Analytical Results and monthly summary data

| GROUNDWATER MONITORING STATION GW-1: COLLINS SITE 2009 - 2015 | | | | | | |
|---|-------|------------|------------|-------|--|--|
| Date | Time | Temp. (°C) | EC (uS/cm) | pH | Depth to Water Table (m) from top of stand pipe | Comments |
| 10-03-09 | 15:30 | N/A | 528 | < 6.2 | 11.59 | pH was measured using a QUIKCHEK pH test strip. |
| 01-04-09 | 11:00 | N/A | 533 | < 6.2 | 11.50 | pH was measured using a Eutech pH 5+ meter |
| 01-05-09 | 10:35 | N/A | 533 | < 6.2 | 11.50 | |
| 01-06-09 | 10:25 | 17.3 | 541 | 4.79 | 11.50 | |
| 24-06-09 | 10:20 | 17 | 542 | 4.53 | 11.50 | |
| 31-07-09 | 9:05 | 17.3 | 598 | 4.98 | 11.59 | |
| 31-08-09 | 9:07 | 17.6 | 610 | 4.81 | 11.60 | |
| 30-09-09 | 9:45 | 18 | 619 | 4.71 | 11.59 | |
| 30-10-09 | 9:45 | 18.5 | 621 | 4.75 | 11.47 | |
| 27-11-09 | 8:00 | 19 | ~ | 4.73 | 11.47 | |
| 04-01-10 | 9:50 | 18.5 | 634 | 4.73 | 11.51 | |
| 02-02-10 | 9:45 | 18.7 | 641 | 4.78 | 11.52 | |
| 01-03-10 | 9:50 | 18.1 | 635 | 4.67 | 11.56 | |
| 31-03-10 | 9:15 | 18.2 | 639 | 4.74 | 11.56 | |
| 30-04-10 | 9:15 | 17.8 | 640 | 4.76 | 11.56 | |
| 01-06-10 | 10:40 | 18.1 | 640 | 4.66 | 11.56 | |
| 30-06-10 | 9:30 | 16.4 | 614 | 5.17 | 11.56 | |
| 02-08-10 | 10:40 | 17.4 | 639 | 4.64 | 11.56 | |
| 01-09-10 | 9:30 | 18.6 | 641 | 4.82 | 11.56 | |
| 05-10-10 | 15:50 | 19.3 | 651 | 4.61 | 11.56 | |
| 05-11-10 | 15:30 | 18.5 | 657 | 5.12 | 11.36 | |
| 07-12-10 | 9:50 | 19 | 670 | 5.09 | 11.32 | |
| 23-12-10 | 12:30 | 19.5 | 952 | 5.12 | 11.32 | |
| 01-02-11 | 12:00 | 20.3 | 657 | 5.17 | 11.39 | |
| 01-04-11 | 11:00 | 18.7 | 778 | 5.01 | 11.39 | |
| 29-04-11 | 11:30 | 18.3 | 745 | 5.12 | 11.39 | |
| 30-05-11 | 10:30 | 17 | 777 | 5.64 | 11.39 | |
| 01-07-11 | 16:30 | 16.5 | 763 | 5.27 | 11.39 | |
| 29-07-11 | 15:30 | 18.5 | 775 | - | 11.29 | |
| 01-09-11 | 15:30 | 18.8 | 851 | 4.64 | 11.29 | |
| 04-10-11 | 13:00 | 18.4 | 847 | 4.66 | 11.29 | |
| 28-10-11 | 15:30 | 19.5 | 846 | 4.48 | 11.29 | |
| 01-12-11 | 8:30 | 17.9 | 896 | 4.51 | 11.35 | |
| 23-12-11 | 9:45 | 18.8 | 793 | 4.49 | 11.35 | |
| 01-02-12 | 16:15 | 18.9 | 782 | 4.48 | 11.35 | |
| 28-02-12 | 8:30 | 18.7 | 806 | 4.42 | 11.35 | |
| 30-03-12 | 15:30 | 19.7 | 775 | 4.52 | 10.77 | |
| 30-04-12 | 14:30 | 18.9 | 772 | 4.59 | 10.77 | |
| 31-05-12 | 12:30 | 19 | 744 | 4.55 | 10.78 | |
| 08-07-12 | 10:30 | 17.5 | 784 | 4.46 | 10.90 | |
| 02-08-12 | 8:00 | 13.2 | 769 | 4.53 | 11.05 | |
| 03-09-12 | 15:30 | 19.3 | 759 | 4.66 | 11.20 | |
| 29-09-12 | 15:00 | 19.2 | 799 | 4.67 | 11.47 | |
| 01-11-12 | 15:00 | 19.8 | 786 | 4.67 | 11.30 | |
| 03-12-12 | 13:00 | 19.1 | 769 | 4.81 | 11.69 | |
| 28-12-12 | 14:30 | 19.1 | 767 | 4.69 | 11.69 | |
| 31-01-13 | 11:30 | 19.2 | 789 | 4.82 | 11.40 | Prolonged period of heavy rain. |
| 04-03-13 | 9:30 | 19.1 | 757 | 4.78 | 11.09 | |
| 03-04-13 | N/A | N/A | 756 | 5.24 | 11.21 | New site personnel (Simon Winter). |
| 03-05-13 | 9:30 | N/A | 620 | 4.40 | 11.17 | Commenced laboratory analysis of pH and EC |
| 03-06-13 | 15:05 | N/A | 670 | 4.80 | 11.20 | |
| 03-07-13 | 15:00 | N/A | 690 | 4.30 | 10.85 | |
| 02-08-13 | 15:00 | N/A | 700 | 5.10 | 10.80 | |
| 03-09-13 | 14:30 | 23 | 700 | 4.40 | 11.05 | |
| 03-10-13 | 12:05 | 16 | 680 | 4.40 | 11.15 | |
| 04-11-13 | 11:25 | 18 | 640 | 4.80 | 11.35 | |
| 03-12-13 | 10:30 | 23 | 690 | 4.70 | 11.28 | |
| 09-01-14 | 14:00 | 19 | 670 | 4.80 | 11.49 | |
| 04-02-14 | 9:45 | 24 | 680 | 4.60 | 11.49 | |
| 07-03-14 | 9:55 | 21 | 545 | 4.60 | 11.50 | |
| 04-04-14 | 10:05 | 20 | 700 | 4.90 | 11.37 | |
| 06-05-14 | 10:00 | 16 | 690 | 4.80 | 11.37 | |
| 03-06-14 | 12:15 | 18 | 652 | 5.26 | 11.47 | |
| 02-07-14 | 11:45 | 17 | 688 | 5.54 | 11.55 | |
| 06-08-14 | 11:45 | 20 | 648 | 5.94 | 11.60 | New site personnel (Cheyne Hudson). |
| 09-09-14 | 11:45 | 21 | 636 | 5.30 | 11.30 | Commenced laboratory analysis of pH and EC at ALSE |
| 08-10-14 | 11:30 | 20 | 628 | 5.40 | 11.45 | |
| 13-11-14 | 11:30 | 22 | 609 | 5.74 | 11.50 | |
| 03-12-14 | 12:00 | 30 | 598 | 5.84 | 11.50 | |
| 09-01-15 | 12:00 | 30 | 601 | 5.68 | 11.45 | |
| 11-02-15 | 11:45 | 28 | 588 | 5.43 | 11.45 | |
| 10-03-15 | 12:00 | 22 | 581 | 5.79 | 11.45 | |
| 08-04-15 | 11:00 | 20 | 573 | 5.13 | 11.40 | |
| 07-05-15 | 11:00 | 20 | 527 | 5.26 | 11.20 | Sampling undertaken by M Rampe |
| 10-06-15 | 9:00 | 15 | 507 | 5.28 | 11.20 | |
| 06-07-15 | 10:00 | 10 | 500 | 4.96 | 11.20 | |
| 07-08-15 | 10:00 | 12 | 480 | 5.58 | 11.45 | |
| 03-09-15 | 9:00 | 11 | 417 | 5.75 | 11.25 | |
| 08-10-15 | 9:00 | 16 | 423 | 5.15 | 11.50 | |
| 06-11-15 | 9:00 | 22 | 456 | 5.26 | 11.45 | |
| 07-12-15 | 10:00 | 23 | 434 | 5.25 | 11.50 | |

| GROUNDWATER MONITORING STATION GW-1: COLLINS SITE 2016 - 2020 | | | | | | |
|---|-------|------------|------------|------|--|----------|
| Date | Time | Temp. (°C) | EC (uS/cm) | pH | Depth to Water Table (m) from top of stand pipe | Comments |
| 04-01-16 | 11:00 | 20 | 409 | 5.00 | 11.50 | |
| 05-02-16 | 10:45 | 22 | 410 | 5.61 | 11.60 | |
| 03-03-16 | 9:00 | 23 | 399 | 5.23 | 11.60 | |
| 06-04-16 | 9:00 | 23 | 359 | 5.03 | 11.40 | |
| 05-05-16 | 12:30 | 22 | 363 | 5.77 | 11.50 | |
| 03-06-16 | 2:00 | 18 | 377 | 5.47 | 11.60 | |
| 04-07-16 | 12:30 | 13 | 372 | 5.32 | 10.70 | |
| 03-08-16 | 10:00 | 12 | 261 | 6.84 | 10.70 | |
| 05-09-16 | 10:00 | 12 | 250 | 5.62 | 10.40 | |
| 01-10-16 | 10:00 | 12 | 252 | 6.16 | 10.50 | |
| 01-11-16 | 8:00 | 11 | 296 | 5.93 | 10.70 | |
| 01-12-16 | 8:00 | 12 | 352 | 5.63 | 10.70 | |
| 06-01-17 | 11:00 | 21 | 363 | 5.45 | 10.70 | |
| 03-02-17 | 8:30 | 22 | 334 | 5.53 | 11.10 | |
| 03-03-17 | 8:30 | 23 | 361 | 5.25 | 11.10 | |
| 04-04-17 | 8:30 | 16 | 392 | 5.46 | 10.80 | |
| 01-05-17 | 10:30 | 16 | 294 | 6.09 | 10.70 | |
| 01-06-17 | 8:00 | 8 | 373 | 5.12 | 11.00 | |
| 03-07-17 | 8:00 | 2 | 356 | 5.63 | 10.90 | |
| 01-08-17 | 9:00 | 12 | 346 | 6.00 | 11.00 | |
| 04-09-17 | 9:00 | 12 | 352 | 5.63 | 11.00 | |
| 10-10-17 | 8:00 | 16 | 349 | 5.57 | 11.10 | |
| 06-11-17 | 9:00 | 16 | 326 | 5.06 | 11.00 | |
| 05-12-17 | 9:00 | 18 | 304 | 5.42 | 11.20 | |
| 11-01-18 | 9:00 | 22 | 305 | 5.72 | 11.10 | |
| 07-02-18 | 10:00 | 25 | 303 | 4.94 | 11.40 | |
| 07-03-18 | 9:00 | 20 | 302 | 4.86 | 11.40 | |
| 06-04-18 | 10:00 | 22 | 318 | 5.43 | 11.40 | |
| 03-05-18 | 10:00 | 12 | 307 | 5.37 | 11.50 | |
| 05-06-18 | 10:00 | 14 | 304 | 5.60 | 11.60 | |
| 06-07-18 | 10:00 | 20 | 306 | 5.61 | 11.50 | |
| 02-08-18 | 9:00 | 15 | 303 | 5.95 | 11.50 | |
| 03-09-18 | 10:00 | 6 | 311 | 5.57 | 11.60 | |
| 03-10-18 | 10:00 | 14 | 338 | 6.24 | 11.60 | |
| 05-11-18 | 10:00 | 20 | 324 | 6.25 | 11.60 | |
| 03-12-18 | 8:30 | 20 | 324 | 6.09 | 11.60 | |
| 11-01-19 | 10:00 | 23 | 291 | 6.07 | 11.50 | |
| 04-02-19 | 8:00 | 22 | 264 | 5.72 | 11.50 | |
| 05-03-19 | 10:00 | 25 | 262 | 5.60 | 11.60 | |
| 01-04-19 | 10:00 | 18 | 273 | 5.62 | 11.60 | |
| 01-05-19 | 10:00 | 17 | 221 | 5.81 | 11.60 | |
| 31-05-19 | 10:00 | 9 | 293 | 5.28 | 11.70 | |
| 27-06-19 | 9:00 | 10 | 288 | 5.85 | 11.70 | |
| 02-08-19 | 9:00 | 5 | 318 | 7.48 | 11.80 | |
| 02-09-19 | 10:00 | 13 | 318 | 5.37 | 11.80 | |
| 03-10-19 | 10:00 | 21 | 310 | 6.57 | 11.80 | |
| 05-11-19 | 10:00 | 23 | 318 | 5.78 | 11.80 | |
| 04-12-19 | 10:00 | 21 | 307 | 6.15 | 11.80 | |
| 02-01-20 | 10:00 | 23 | 302 | 5.66 | 11.80 | |
| 04-02-20 | 10:00 | 19 | 344 | 5.57 | 11.90 | |
| 03-03-20 | 2:00 | 23 | 298 | 5.83 | 10.96 | |
| 01-04-20 | 11:00 | 22 | 304 | 5.65 | 11.10 | |
| 04-05-20 | 11:00 | 21 | 299 | 5.55 | 11.10 | |
| 01-06-20 | 11:00 | 19 | 272 | 6.14 | 11.40 | |
| 02-07-20 | 8:00 | 3 | 243 | 6.79 | 11.50 | |
| 03-08-20 | 10:00 | 5 | 267 | 6.02 | 11.50 | |
| 02-09-20 | 8:00 | 6 | 285 | 5.57 | 11.30 | |
| 01-10-20 | 8:00 | 15 | 255 | 6.45 | 11.30 | |

| Period | TIM (g/m2/month) | | | Notes | Controls Implemented |
|----------|------------------|------|------|--|--|
| | MS 1 | MS 2 | MS 3 | | |
| Feb-13 | 1.2 | 1.5 | 0.5 | Introduction of Station 3 | |
| Mar-13 | 0.6 | 1.1 | 2 | | |
| Apr-13 | 1.6 | 1.5 | 3.1* | *TIM exceedance | *Measured Ash Content |
| May-13 | 0.4 | 0.8 | 1.8 | | |
| Jun-13 | 0.7 | 1.3 | 1.7 | | |
| Jul-13 | 0.4 | 0.5 | 1.3 | | |
| Aug-13 | 0.4 | 0.2 | 0.4 | | |
| Sep-13 | 0.5 | 1.4 | 0.8 | | |
| Oct-13 | 0.7 | 1.2 | 1.1 | | |
| Nov-13 | 0.1 | 0.3 | 0.1 | | |
| Dec-13 | 1.7 | 1.1 | 1.2 | | |
| Jan-14 | 0.7 | 0.9 | 1 | | |
| Feb-14 | 0.8 | 1.9 | 0.7 | | |
| Mar-14 | 0.7 | 1.4 | 1.8 | | |
| Apr-14 | 0.4 | 2.1 | 0.6 | | |
| May-14 | 1.2 | 1.1 | 1.2 | Cheyne Hudson takes over sampling and reporting | Mesh screens inserted to filter organic content |
| Jun-14 | 0.1 | 0.1 | 0.1 | | |
| Jul-14 | 0.4 | 0.4 | 0.8 | | |
| Aug-14 | 2 | 2* | ** | *Funnel in jug smashed **Jug smashed. | |
| Sep-14 | 2.1 | 0.6 | 1.5 | | |
| Oct-14 | 1.8 | 0.9 | 1.6 | | |
| Nov-14 | 1.5 | 2.8 | 6.2* | *Site clean-up and mow on adjacent rental property | |
| Dec-14 | 2.2 | 2.2 | 1.6 | | |
| Jan-15 | 1.2 | 1.2 | 2 | | |
| Feb-15 | 1.7 | 0.9 | 2.3 | | |
| Mar-15 | 2.9 | 3.3 | 3.6 | | |
| Apr-15 | 6* | 1.6 | 4.4 | *New earthworks noted 50 metres from M1 | *Monitor results May-15 due to new E1 extraction |
| May-15 | 1.5 | 0.9 | 0.9 | | |
| Jun-15 | 1.6 | 1.2 | 2.0 | | |
| Jul-15 | 1.9 | 0.8 | 1.5 | | |
| Aug-15 | 4.2* | 1.1 | 2.5 | *Expanded quarry area to within 20m of M1. | *Relocation of Monitoring Sites 1 and 2 (September) |
| Sep-15 | 1.7 | 0.9 | 6.1* | *Expansion of nearby Spring Farm urban | *Regular inspection monitor urban development activity |
| Oct-15 | 3.9 | 4 | 6.4* | *Hot windy weather and nearby grass mowing | *Dust suppression irrigation |
| Nov-15 | 1.7 | 0.5 | 2.4 | | |
| Dec-15 | 3.5 | 2.4 | 5.3* | development | *Regular inspection monitor urban development activity |
| Jan-16 | 2 | 1 | 4.7* | *Expansion of nearby Spring Farm urban | *Regular inspection monitor urban development activity |
| Feb-16 | 1.5 | 1.1 | 1.9 | | |
| Mar-16 | 3.3 | 2.5 | 2.5 | | |
| Apr-16 | 1.2 | 1.8 | 2 | | |
| May-16 | 0.9 | 1.5 | 1.6 | | |
| Jun-16 | 2.7 | 3.6 | 3.2 | | |
| Jul-16 | 0.9 | 0.8 | 4 | | |
| Aug-16 | 0.5 | 3.3 | 0.8 | | |
| Sep-16 | 1.0 | 2.3 | 1.6 | | |
| Oct-16 | 1.2 | 0.7 | 1.8 | | |
| Nov-16 | 1.0 | 0.8 | 2.8 | | |
| Dec-16 | 1.6 | 2.6 | 11* | *Springs Road widening and very hot dry weather | |
| Jan-17 | 1.3 | 1.3 | 2.9 | | |
| Feb-17 | 1.0 | 0.9 | 2.1 | | |
| Mar-17 | 2.7 | 1.5 | 1.8 | | |
| Apr-17 | 0.6 | 0.4 | 2.9 | | |
| May-17 | 0.7 | 0.5 | 1.8 | | |
| Jun-17 | 1.2 | 0.6 | 1.3 | | |
| Jul-17 | 0.8 | 1.2 | 1.5 | | |
| Aug-17 | 0.3 | 1.3 | 2.2 | | |
| Set - 17 | 1.0 | 1.6 | 4.3 | High vegetable (leaves)and organic (bugs) content in all samples | |
| Oct-17 | 1.7 | 2.8 | 2.2 | | |
| Nov-17 | 0.9 | 1.5 | 4.6 | High vegetable (leaves)and organic (bugs) content in all samples | |
| Dec-17 | 0.6 | 1.2 | 2.3 | | |
| Jan-18 | 1.3 | 2.0 | 2.8 | | |
| Feb-18 | 0.5 | 1.9 | 5.6 | Very hot and dry month | |
| Mar-18 | 0.6 | 0.7 | 7.2 | Very hot and dry month and at times windy | |
| Apr-18 | 6.7 | 1.1 | 2.6 | MS-1 sample polluted - bird droppings? | |
| May-18 | 0.4 | 0.6 | 2.5 | | |
| Jun-18 | 0.5 | 0.5 | 34.1 | MS-1 sample highly polluted - anomalous result | |
| Jul-18 | 0.4 | 0.8 | 0.7 | | |
| Aug-18 | 0.6 | 0.9 | 0.7 | | |
| Sep-18 | 1.0 | 0.8 | 1.5 | | |
| Oct-18 | 0.7 | 1.2 | 1.4 | | |
| Nov-18 | 0.5 | 1.0 | 1.8 | | |
| Dec-18 | 2.4 | 0.7 | 2.0 | | |
| Jan-19 | 1.6 | 3.5 | 4.7 | Very hot and dry month and at times windy | |
| Feb-19 | 1.0 | 2.5 | 3.6 | | |
| Mar-19 | 2.0 | 4.3 | 1.6 | No significant activities noted | |
| Apr-19 | 0.7 | 3.2 | 1.2 | | |
| May-19 | 0.5 | 1.9 | 1.4 | Fresh road works around Stations 2 and 3 | |
| Jun-19 | 0.7 | 1.3 | 1.1 | | |
| Jul-19 | 0.2 | 0.4 | 0.6 | | |
| Aug-19 | 0.4 | 0.8 | 1.4 | | |
| Sep-19 | 1.0 | 0.3 | 1.1 | | |
| Oct-19 | 1.5 | 2.3 | 3.8 | | |
| Nov-19 | 2.4 | 1.2 | 4.6 | Month of high winds and smoke from bushfires | |
| Jan-20 | 1.2 | 2.8 | 2.2 | | |
| Feb-20 | 6.3 | 6.5 | 6.0 | Month of high winds, bushfire smoke and drought conditions | |
| Mar-20 | 0.5 | 11.1 | 1.2 | Earthmoving activities near Station 2 contribute to exceedance | |
| Apr-20 | 0.9 | 1.2 | 0.8 | | |
| May-20 | 1.4 | 0.8 | 1.4 | | |
| Jun-20 | 0.2 | 0.8 | 0.8 | | |
| Jul-20 | 0.3 | 1.4 | 0.4 | | |
| Aug-20 | 0.6 | 2.4 | 1.1 | | |
| Sep-20 | 0.8 | 7.7 | 0.9 | Earthmoving activities near Station 2 contribute to exceedance | |
| Oct-20 | 1.6 | 28.3 | 1.6 | Earthmoving activities near Station 2 contribute to exceedance | |

APPENDIX 3: Laboratory Quality Control Documentation