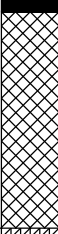
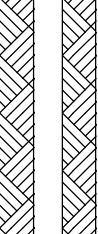




## Appendix E

### Soil Vapour Bore Construction Logs

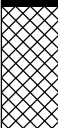




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Client: <i>Renewal SA</i>	Completion Date: <i>14/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 1.9 m</i>	Screened Interval: <i>1.9 - 2.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>0.6 - 1.4 m</i>	Grout Backfill: <i>0.0 - 0.6 m</i>
Drilling Contractor: <i>Geodril</i>	Gravel Pack: <i>1.4 - 2.2 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour, black staining observed in surficial horizon</i>	TOC (mAHD): <i>42.745</i>	Logged By: <i>MB</i>
	Easting: <i>6123272.838 Zone 54</i>	Northing: <i>278123.043 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction		
0.03	Fill Material		Bitumen	0.03				← Grout Backfill		
0.50			Fill: silty CLAY, brown, firm, dry, low plasticity, trace gravels (grey, ironstone and calcareous), black staining							
0.50	Natural Material		Silty CLAY: brown, firm, dry, medium plasticity, trace grey and calcareous gravels (1 - 2 mm diameter)	0.50	BSE_SV01A_0.6-0.7	0.8		← Bentonite Seal		
1.40			Silty CLAY: brown, firm, dry, medium plasticity, calcareous gravels (2 - 5 mm diameter)	1.40	BSE_SV01A_1.5-1.6	1.8				
1.70			Silty CLAY: brown, firm, dry, medium plasticity, trace grey and ironstone gravels (0.5 - 2 mm diameter)	1.70						← 1.8 mm Graded Sand
2.20			Bore hole terminated at 2.2 m	2.20						← Stainless Steel Mesh ← 1.8 mm Graded Sand





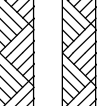

BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>14/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 3.9 m</i>	Screened Interval: <i>3.9 - 4.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>2.6 - 3.4 m</i>	Grout Backfill: <i>0.0 - 2.6 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>3.4 - 4.2 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHd): <i>42.722</i>	Logged By: <i>MB</i>
	Easting: <i>6123272.606 Zone 54</i>	Northing: <i>278123.881 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction	
0.03	Fill Material		Bitumen	0.03					
			Fill: silty CLAY, brown, firm, dry, low plasticity, trace gravels (grey, ironstone and calcareous), black staining						
0.50	Natural Material		Silty CLAY: brown, firm, dry, medium plasticity, trace grey and calcareous gravels (1 - 2 mm diameter)	0.50	BSE_SV01B_0.6-0.7	0.8		← Grout Backfill	
1.40			Silty CLAY: brown, firm, dry, medium plasticity, calcareous gravels (2 - 5 mm diameter)	1.40	BSE_SV01B_1.5-1.6	1.8			
1.70			Silty CLAY: brown, firm, dry, medium plasticity, trace grey and ironstone gravels (0.5 - 2 mm diameter)	1.70					
2.90			Clayey SAND: orange/brown, loose, dry, fine to medium sands, trace grey gravels (up to 1 mm diameter)	2.90	BSE_SV01B_2.6-2.7	2.2			
3.20			Silty CLAY: orange/brown, firm, dry, low plasticity, trace grey and ironstone gravels (up to 1 mm diameter)	3.20				← Bentonite Seal	
3.70			Clayey SAND: grey/brown with orange mottling, fine to medium sands, loose, dry, trace grey gravels (up to 2 mm diameter)	3.70					← 1.8 mm Graded Sand
4.20			Bore hole terminated at 4.2 m	4.20	BSE_SV01B_4-4.1	2.7			← Stainless Steel Mesh

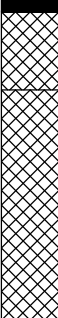
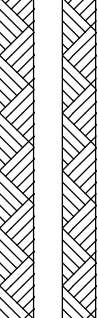


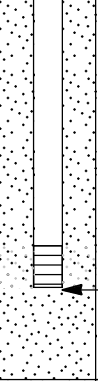
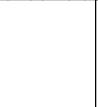
BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ\_26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>14/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 7.4 m</i>	Screened Interval: <i>7.4 - 7.5 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>5.8 - 6.9 m</i>	Grout Backfill: <i>0.0 - 5.8 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>6.9 - 7.6 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>42.702</i>	Logged By: <i>MB</i>
	Easting: <i>6123272.381 Zone 54</i>	Northing: <i>278124.759 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✱)	PID (ppm)	Well Log	Well Construction		
0.03	Fill Material		Bitumen	0.03						
0.50			Fill: silty CLAY, brown, firm, dry, low plasticity, trace gravels (grey, ironstone and calcareous), black staining		BSE_SV01C_0.6-0.7	0.8				
1.40			Silty CLAY: brown, firm, dry, medium plasticity, trace grey and calcareous gravels (1 - 2 mm diameter)		BSE_SV01C_1.5-1.6	1.8				
1.70			Silty CLAY: brown, firm, dry, medium plasticity, calcareous gravels (2 - 5 mm diameter)							
2.0	Natural Material		Silty CLAY: brown, firm, dry, medium plasticity, trace grey and ironstone gravels (0.5 - 2 mm diameter)	1.70						
2.90			Clayey SAND: orange/brown, loose, dry, fine to medium sands, trace grey gravels (up to 1 mm diameter)	2.90						
3.20			Silty CLAY: orange/brown, firm, dry, low plasticity, trace grey and ironstone gravels (up to 1 mm diameter)	3.20						
3.70			Clayey SAND: grey/brown with orange mottling, fine to medium sands, loose, dry, trace grey graveler	3.70						
4.00			Silty CLAY: orange/brown with grey mottling, firm, slightly moist, medium plasticity, trace grey and ironstone gravels	4.00	BSE_SV01C_4.4-4.1 BSE_SV01C_4.1-4.2	2.7 0.9				
4.40			Silty CLAY: red/brown with grey mottling, firm, dry, medium plasticity, trace grey and ironstone gravels (up to 1 mm diameter)	4.40						
5.20			Clayey SAND: orange/brown, loose, dry, fine sands, trace grey and calcareous gravels (up to 1 mm diameter)	5.20						
6.60			Clayey SAND: red/brown, loose, dry, fine sands, trace grey and calcareous gravels (up to 1 mm diameter)	6.60						
7.10			Clayey GRAVEL: orange/red/brown, loose, slightly moist, sub-angular to sub-rounded poorly sorted gravels (grey, ironstone and calcareous) (3 - 12 mm diameter)	7.10	BSE_SV01C_7.3-7.4	0.3				
7.60			Bore hole terminated at 7.6 m							



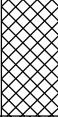
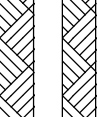

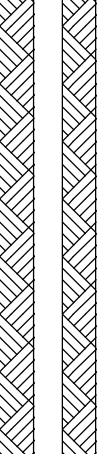

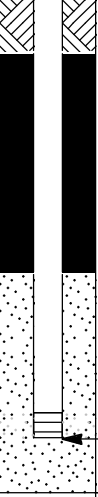
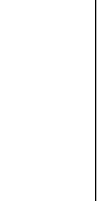
BLUESPHERE MONITORING WELL 50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>14/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 1.95 m</i>	Screened Interval: <i>1.95 - 2.05 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>0.9 - 1.4 m</i>	Grout Backfill: <i>0.0 - 0.9 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>1.4 - 2.25 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>42.015</i>	Logged By: <i>MB</i>
	Easting: <i>6123250.971 Zone 54</i>	Northing: <i>278055.263 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction
0.03	Fill Material		Bitumen	0.03	BSE_SV02A_0.1-0.2	1.5		← Grout Backfill
0.20			Fill: gravelly SAND, brown/grey, dry, loose, grey gravels (up to 15 mm diameter)					
0.70	Natural Material		Fill: silty SAND, brown, dry, loose, fine to medium sands, trace grey and calcareous gravels (3 - 14 mm diameter)	0.70	BSE_SV02A_1-1.1	0.4		← Bentonite Seal
1.0			Silty CLAY: red/brown/orange, dry, firm, medium plasticity, trace grey and ironstone gravels					
2.0								← 1.8 mm Graded Sand
2.25			Bore hole terminated at 2.25 m	2.25				← Stainless Steel Mesh ← 1.8 mm Graded Sand








BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>14/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 3.9 m</i>	Screened Interval: <i>3.9 - 4.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>2.6 - 3.4 m</i>	Grout Backfill: <i>0.0 - 2.6 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>3.4 - 4.2 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>42.033</i>	Logged By: <i>MB</i>
	Easting: <i>6123250.006 Zone 54</i>	Northing: <i>278054.967 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction
0.03	Fill Material		Bitumen	0.03				
			Fill: gravelly SAND, brown/grey, dry, loose, grey gravels (up to 15 mm diameter)	0.20	BSE_SV02B_0.1-0.2	1.5		
0.70	Fill Material		Fill: silty SAND, brown, dry, loose, fine to medium sands, trace grey and calcareous gravels (3 - 14 mm diameter)					
			Silty CLAY: red/brown/orange, dry, firm, medium plasticity, trace grey and ironstone gravels					
1.0	Natural Material		Silty CLAY: red/brown/orange, dry, firm, medium plasticity, 20% trace grey and ironstone gravels (20 - 40 mm diameter)	2.40	BSE_SV02B_1-1.1	0.4		← Grout Backfill
2.70			Clayey SAND: orange/brown with grey mottling, loose, dry, grey and ironstone gravels (2 - 10 mm diameter)	2.70				
3.0	Natural Material		Clayey SAND: orange/brown with grey mottling, loose, dry, grey and ironstone gravels (2 - 10 mm diameter)	2.70				← Bentonite Seal
4.0				4.0				
4.20			Bore hole terminated at 4.2 m	4.20				← 1.8 mm Graded Sand




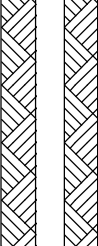





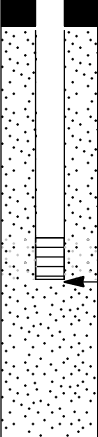
BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>14/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 7.95 m</i>	Screened Interval: <i>7.95 - 8.05 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>6.5 - 7.25 m</i>	Grout Backfill: <i>0.0 - 6.5 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>7.25 - 8.1 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHd): <i>42.048</i>	Logged By: <i>MB</i>
	Easting: <i>6123249.179 Zone 54</i>	Northing: <i>278054.642 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction	
0.03	Fill Material		Bitumen	0.03	BSE_SV02C_0.1-0.2	1.5			
0.20			Fill: gravelly SAND, brown/grey, dry, loose, grey gravels (up to 15 mm diameter)						
0.70			Fill: silty SAND, brown, dry, loose, fine to medium sands, trace grey and calcareous gravels (3 - 14 mm diameter)						
1.0	Natural Material		Silty CLAY: red/brown/orange, dry, firm, medium plasticity, trace grey and ironstone gravels	0.70	BSE_SV02C_1-1.1	0.4			
2.40			Silty CLAY: red/brown/orange, dry, firm, medium plasticity, 20% trace grey and ironstone gravels (20 - 40 mm diameter)						
2.70			Clayey SAND: orange/brown with grey mottling, loose, dry, grey and ironstone gravels (2 - 10 mm diameter)	2.70	← Grout Backfill				
4.20			Silty CLAY: orange/brown with grey mottling, dry, firm, low plasticity, trace grey gravels	4.20					
4.60			Sandy CLAY: red/brown with grey mottling, dry, firm, low plasticity, trace grey gravels	4.60		BSE_SV02C_4.5-4.6	0.3		
5.00	Silty CLAY: orange/brown with grey mottling, dry, firm, low plasticity	5.00							
6.50	Natural Material		Gravelly SAND, loose, dry, fine-medium sands, grey and calcareous gravels (up to 20 mm diameter)	6.50	BSE_SV02C_6.1-6.2	0.4			
7.0				7.0	BSE_SV02C_6.9-7	0.6			← Bentonite Seal
7.50			Silty CLAY: orange/brown, stiff, dry, medium plasticity, trace grey gravels	7.50					← 1.8 mm Graded Sand
8.0				8.0	BSE_SV02C_7.9-8	0.8		← 1.8 mm Graded Sand	
8.10			Bore hole terminated at 8.1 m	8.10					← Stainless Steel Mesh

BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

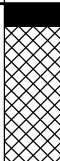
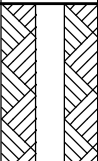


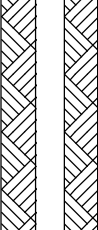

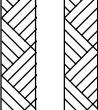






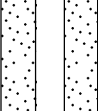




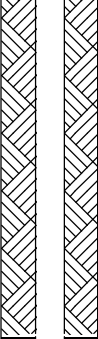




Client: <i>Renewal SA</i>	Completion Date: <i>14/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 1.9 m</i>	Screened Interval: <i>1.9 - 2.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>0.6 - 1.45 m</i>	Grout Backfill: <i>0.0 - 0.6 m</i>
Drilling Contractor: <i>Geodrive</i>	Gravel Pack: <i>1.45 - 2.35 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>42.341</i>	Logged By: <i>MB</i>
	Easting: <i>6123071.251 Zone 54</i>	Northing: <i>278049.435 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction
	Fill Material		Bitumen reinforced with concrete	0.08				
			Fill: gravelly SAND, loose, dry, grey and ironstone gravels (up to 14 mm diameter)					← Grout Backfill
	Natural Material		Silty CLAY: red/brown, firm, dry, medium plasticity, trace grey gravels	0.60				
1.0			Silty SAND: brown, dry, loose, trace gravels	0.90				← Bentonite Seal
			Silty CLAY: brown/orange, firm, dry, high plasticity	1.40				← 1.8 mm Graded Sand
2.0								← Stainless Steel Mesh
			Bore hole terminated at 2.35 m	2.35				← 1.8 mm Graded Sand

BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18














Client: <i>Renewal SA</i>	Completion Date: <i>15/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 3.9 m</i>	Screened Interval: <i>3.9 - 4.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>2.6 - 3.4 m</i>	Grout Backfill: <i>0.0 - 2.6 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>3.4 - 4.2 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>42.338</i>	Logged By: <i>MB</i>
	Easting: <i>6123071.24 Zone 54</i>	Northing: <i>278050.72 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction	
	Fill Material		Bitumen reinforced with concrete	0.08					
			Fill: gravelly SAND, loose, dry, grey and ironstone gravels (up to 14 mm diameter)	0.60					
1.0	Natural Material		Silty CLAY: red/brown, firm, dry, medium plasticity, trace grey gravels	0.90					
			Silty SAND: brown, dry, loose, trace gravels	1.40					
			Silty CLAY: brown/orange, firm, dry, high plasticity	2.50					
2.0			Silty SAND: orange/brown, dry, loose, trace grey and ironstone gravels	3.00					
3.0		Sandy CLAY: orange/brown with grey mottling, firm, dry, medium plasticity, trace grey and ironstone gravels	4.00						
4.0		Silty CLAY: red/brown with grey mottling, firm, dry, medium plasticity, trace grey and ironstone gravels	4.20						
			Bore hole terminated at 4.2 m						
									
									
									
									
									
									
									
									

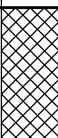
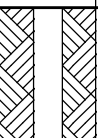


BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>15/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 7.6 m</i>	Screened Interval: <i>7.6 - 7.7 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>6.2 - 7.0 m</i>	Grout Backfill: <i>0.0 - 6.2 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>7.0 - 7.8 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>JH/HA/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>42.343</i>	Logged By: <i>MB</i>
	Easting: <i>6123071.477 Zone 54</i>	Northing: <i>278051.697 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction
0.08	Fill Material		Bitumen reinforced with concrete Fill: gravelly SAND, loose, dry, grey and ironstone gravels (up to 14 mm diameter)	0.08				
0.60			Silty CLAY: red/brown, firm, dry, medium plasticity, trace grey gravels	0.60				
0.90			Silty SAND: brown, dry, loose, trace gravels	0.90				
1.40			Silty CLAY: brown/orange, firm, dry, high plasticity	1.40				
2.50	Natural Material		Silty SAND: orange/brown, dry, loose, trace grey and ironstone gravels	2.50				
3.00			Sandy CLAY: orange/brown with grey mottling, firm, dry, low plasticity, trace grey and ironstone gravels	3.00				← Grout Backfill
4.00			Silty CLAY: red/brown with grey mottling, firm, dry, medium plasticity, trace grey and ironstone gravels	4.00	BSE SV03C 4.3-4.4	0.4		
5.60			Silty SAND: orange/brown, loose, dry, trace grey, ironstone and calcareous gravels	5.60	BSE SV03C 5.8-5.9	0.3		
6.10			Silty CLAY: red/brown with grey mottling, firm, dry, medium plasticity, trace grey and ironstone gravels	6.10				
6.50			Silty CLAY: grey/orange/white, firm, dry, low plasticity, calcareous material, trace fine to medium sands, trace grey and calcareous gravels	6.50				← Bentonite Seal
7.50			Silty CLAY: brown with grey mottling, firm, dry, medium plasticity	7.50				← 1.8 mm Graded Sand
7.80			Bore hole terminated at 7.8 m	7.80				← Stainless Steel Mesh ← 1.8 mm Graded Sand


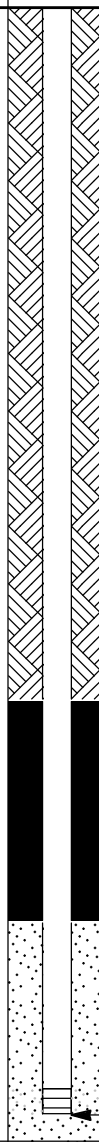


BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>15/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 1.9 m</i>	Screened Interval: <i>1.9 - 2.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>0.6 - 1.4 m</i>	Grout Backfill: <i>0.0 - 0.6 m</i>
Drilling Contractor: <i>Geodrill</i>	Gravel Pack: <i>1.4 - 2.2 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>H/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>43.269</i>	Logged By: <i>MB</i>
	Easting: <i>6122872.723 Zone 54</i>	Northing: <i>278058.898 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction
	Fill Material		Fill: gravelly SAND, dark brown, loose, moist, fine to medium sands, gravels (1 - 20 mm diameter)					← Grout Backfill
0.30			Silty CLAY: red/brown, firm, slightly moist, high plasticity, trace gravels		BSE_SV04A_0.15-0.25	0.6		
0.70	Natural Material		Silty CLAY: orange/brown with grey mottling, firm, dry, medium plasticity, trace black staining (streaks), sandstone at 1.3 m					← Bentonite Seal
1.40			Sandy CLAY: orange/brown, soft, dry, medium plasticity, trace grey, ironstone and calcareous gravels					
2.20			Bore hole terminated at 2.2 m					













BLUESPHERE MONITORING WELL - 50130.07 - SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>15/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 3.9 m</i>	Screened Interval: <i>3.9 - 4.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>2.5 - 3.3 m</i>	Grout Backfill: <i>0.0 - 2.5 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>3.3 - 4.1 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>HAPT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>43.276</i>	Logged By: <i>MB</i>
	Easting: <i>6122871.458 Zone 54</i>	Northing: <i>278058.996 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction
1.0	Fill Material		Fill: gravelly SAND, dark brown, loose, moist, fine to medium sands, gravels (1 - 20 mm diameter)					
			Silty CLAY: red/brown, firm, slightly moist, high plasticity, trace gravels	0.30	BSE_SV04B_0.15-0.25	0.6		
	Silty CLAY: orange/brown with grey mottling, firm, dry, medium plasticity, trace black staining (streaks), sandstone at 1.3 m	0.70						
	Sandy CLAY: orange/brown, soft, dry, high plasticity, trace grey, ironstone and calcareous gravels	1.40						
	Natural Material							
3.0			Silty CLAY: red/brown, firm, dry, medium plasticity, trace ironstone gravels	2.70				
			Silty CLAY: light brown with grey mottling, medium plasticity, trace grey, ironstone and calcareous gravels (1 - 2 mm)	3.00				
4.0								
			Bore hole terminated at 4.1 m	4.10				









BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>15/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 6.4 m</i>	Screened Interval: <i>6.4 - 6.5 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>5.0 - 5.8 m</i>	Grout Backfill: <i>0.0 - 5.0 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>5.8 - 6.6 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>H/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>43.298</i>	Logged By: <i>MB</i>
	Easting: <i>6122870.546 Zone 54</i>	Northing: <i>278059.041 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✱)	PID (ppm)	Well Log	Well Construction
	Fill Material		Fill: gravelly SAND, dark brown, loose, moist, fine to medium sands, gravels (1 - 20 mm diameter)					
0.30			Silty CLAY: red/brown, firm, slightly moist, high plasticity, trace gravels	0.30	BSE_SV04C_0.15-0.25	0.6		
0.70			Silty CLAY: orange/brown with grey mottling, firm, dry, medium plasticity, trace black staining (streaks), sandstone at 1.3 m	0.70				
1.40			Sandy CLAY: orange/brown, soft, dry, high plasticity, trace grey, ironstone and calcareous gravels	1.40				
2.70			Silty CLAY: red/brown, firm, dry, medium plasticity, trace ironstone gravels	2.70	BSE_SV04C_2.2-2.3	0.3		← Grout Backfill
3.00			Silty CLAY: light brown with grey mottling, medium plasticity, trace grey, ironstone and calcareous gravels (1 - 2 mm)	3.00				
4.00	Natural Material		Silty CLAY: brown, soft, slightly moist, high plasticity, trace grey gravels	4.00	BSE_SV04C_3.8-3.9	0.8		
4.20			Silty CLAY: brown with grey mottling, dry, firm, medium plasticity, trace gravels	4.20				
5.0				5.0	BSE_SV04C_5-5.1	0.3		← Bentonite Seal
5.70			Silty CLAY: grey with brown mottling, dry, firm, medium plasticity, calcareous gravels (1 - 3 mm diameter)	5.70				
6.0				6.0	BSE_SV04C_6.2-6.3	0.8		← 1.8 mm Graded Sand
6.60			Bore hole terminated at 6.6 m	6.60				← Stainless Steel Mesh ← 1.8 mm Graded Sand











BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ\_26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>15/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 1.9 m</i>	Screened Interval: <i>1.9 - 2.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>0.6 - 1.4 m</i>	Grout Backfill: <i>0.0 - 0.6 m</i>
Drilling Contractor: <i>Geodrill</i>	Gravel Pack: <i>1.4 - 2.2 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>HAPT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>45.066</i>	Logged By: <i>MB</i>
	Easting: <i>6122875.055 Zone 54</i>	Northing: <i>278131.215 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction
0.0 - 0.10	Fill Material		Fill: sandy GRAVEL, loose, moist, gravels (1 - 16 mm diameter)	0.10				← Grout Backfill
			Fill: silty SAND, loose, moist, trace grey and ironstone gravels					
0.10 - 0.40	Natural Material		Silty CLAY: brown, firm, dry, medium plasticity, trace grey and ironstone gravels	0.40				
Silty CLAY: orange/brown, firm, dry, high plasticity, trace gravels			0.70					
0.70 - 1.30	Natural Material		Sandstone	1.30	BSE_SV05A_1-1.1	0.3		← Bentonite Seal
1.30 - 1.40			Silty SAND, orange/brown, soft, dry, fine-medium sands, gravels (1 - 23 mm diameter)	1.40				
1.40 - 2.20	Natural Material		Silty SAND, orange/brown, soft, dry, fine-medium sands, gravels (1 - 23 mm diameter)	1.40				← 1.8 mm Graded Sand
2.00 - 2.20			Bore hole terminated at 2.2 m	2.20				

BLUESPHERE MONITORING WELL - 50130.07 - SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>15/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 3.9 m</i>	Screened Interval: <i>3.9 - 4.0 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>2.6 - 3.4 m</i>	Grout Backfill: <i>0.0 - 2.6 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>3.4 - 4.2 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>H/PT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHD): <i>45.059</i>	Logged By: <i>MB</i>
	Easting: <i>6122874.155 Zone 54</i>	Northing: <i>278131.103 Zone 54</i>

Depth (m)	Interpreted Formation	Graphic Log	SOIL DESCRIPTION	Contact Depth (m)	Sample ID Analysed (✳)	PID (ppm)	Well Log	Well Construction		
0.0 - 0.10	Fill Material		Fill: sandy GRAVEL, loose, moist, gravels (1 - 16 mm diameter)	0.10						
			Fill: silty SAND, loose, moist, trace grey and ironstone gravels							
0.10 - 0.40	Natural Material		Silty CLAY: brown, firm, dry, medium plasticity, trace grey and ironstone gravels	0.40						
0.40 - 0.70			Silty CLAY: orange/brown, firm, dry, high plasticity, trace gravels	0.70						
0.70 - 1.30			Sandstone	1.30						
1.30 - 1.40			Silty SAND, orange/brown, soft, dry, fine-medium sands, gravels (1 - 23 mm diameter)	1.40				← Grout Backfill		
1.40 - 2.80					BSE_SV05B_1-1.1	0.3				
2.80 - 3.40			Silty CLAY: orange/brown with grey mottling, firm, dry, medium plasticity, trace grey, ironstone and calcareous gravels	2.80				← Bentonite Seal		
3.40 - 4.00					BSE_SV05B_2-2.1	0.3				
4.00 - 4.20					BSE_SV05B_3-9-4	0.5		← 1.8 mm Graded Sand ← Stainless Steel Mesh ← 1.8 mm Graded Sand		
4.20			Bore hole terminated at 4.2 m	4.20						

BLUESPHERE MONITORING WELL\_50130.07\_SV BORE CONSTRUCTION LOGS\_25MAY18.GPJ 26/7/18

Client: <i>Renewal SA</i>	Completion Date: <i>15/11/2017</i>	BCL No.: <i>N/A</i>
Project Name: <i>Tonsley VSCAP Investigations</i>	Construction Details:	Surface Feature: <i>Gatic</i>
Project Number: <i>50130.07</i>	Blank Casing: <i>0.0 - 6.6 m</i>	Screened Interval: <i>6.6 - 6.7 m</i>
Location: <i>Tonsley Innovation District</i>	Bentonite Seal: <i>5.2 - 6.0 m</i>	Grout Backfill: <i>0.0 - 5.2 m</i>
Drilling Contractor: <i>Geodrift</i>	Gravel Pack: <i>6.0 - 6.8 m</i>	Annulus (m): <i>50 mm</i>
Drilling Method: <i>HAPT</i>	SWL:	Encountered WL:
Comments: <i>No odour or stains noted</i>	TOC (mAHd): <i>45.055</i>	Logged By: <i>MB</i>
	Easting: <i>6122873.147 Zone 54</i>	Northing: <i>278131.043 Zone 54</i>

