

APPENDIX A BORELOGS



	LOCATION Graham Street, Albert Park		Borehole Log: BH1	Logged by JI
	SURFACE ELEVATION	JOB NUMBER 210074		
ſ	GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
	DRILL METHOD PT	DATE 27/1/2011		

			SAMPLES		t	Р	ID	р	н				
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM (topsoil) with some bark chips		_ 0.2					М			6.5			
Yellow orange, silty CLAY with minor coke and ash		0.4					М			8		Alexadore	
Increase in coke, ash and brick fragments		0.6 										No odour	
Loose, black, poorly sorted, silty SAND with some ash and coke		0.8 					D						
Black, sandy SILT		- —1.2					D			8			
Dark yellow orange, sandy CLAY with some ash (reworked Brighton Group Sediments)		1.4 											
NATURAL Yellow/orange/ cream, sandy SILT with trace grey streaks		1.6 1.8 2.0 2.2					D/M			4.5			
Grey, clayey SAND with some orange and yellow mottling		_ 2.4 2.6					М						EOH @ 2.7 mBGL
		—2.8 — —3.0			_								

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

ſ	LOCATION Graham St, Albert Park		Borehole Log: BH2	Logged by JI
ľ	SURFACE ELEVATION	JOB NUMBER 210074		
ſ	GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
	DRILL METHOD PT	DATE 27/1/2011		

			5	SAM	PLE	s	Ŧ	P	D	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with rootlets (topsoil)		_					D			7			
Concrete		0.2											Two samples collected @ 0.2-0.3
Yellow/brown, gravelly SAND		- 0.4					D		26	6.5			mBGL (for sulphur testing)
Loose, black, coke and ash (distinct layer)		- 0.6											
Firm, brown, silty CLAY with rootlets (reworked natural)		- 											
Clayey SAND		- 1.0					М		13	6			
NATURAL Coarse, clayey SAND													
Yellow/orange, fine, clayey SAND		- 					D		19	5			
		1.4											EOH @ 1.5 mBGL
		1.6 _											
		1.8											
		2.0											
		_											
		2.2											
		2.4											
		_											
		2.6											
		- 											
		— 2.ð —											
	-	3.0											



LOCATION Graham Street, Albert Park		Borehole Log: BH3	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD PT	DATE 27/1/2011		

			5	SAM	PLE	s	Ŧ	Р	D	р	Н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with rootlets (topsoil)		_				D				6			
Fine, white SAND with concrete fragments		0.2				D				6			
Brown, sandy CLAY with ash, coke and brick (reworked natural)		- 											Two samples taken @ 0.2-0.3 mBGL
Brown/black SAND with ash, coke and brick fragments		- 0.6				D/M			15	6.5			EOH @ 0.7 mBGL, refusal
		—0.8											
		_											
		1.0											
		1.2											
		_											
		1.4											
		- 1.6											
		_											
		1.8											
		-											
		2.0											
		2.2											
		_											
		2.4											
		_ 2.6											
		_											
		2.8											
		_ 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: BH4	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD PT	DATE 27/1/2011		

			5	SAM	PLE	s	t	P	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Brown, sandy LOAM with rootlets (topsoil)		-								6			No photo taken
Loose, black, sandy SILT with spent oxides and green staining		0.2							27	6.5		Strong hydrocarbon odour	Two samples taken @ 0.2-0.3 mBGL
Brick fragments		_0.4											
White/brown, sandy CLAY with green staining, concrete fragments and rootlets		- 0.6							12	6			Very green EOH @ 0.7 mBGL, refusal
		_0.8											
	-	_											
	-	_1.0											
	-	-											
	-	_1.2											
	-	-											
	-	_1.4											
	-	-											
	-	1.6											
		-											
	-	1.8											
		-											
		_2.0											
		-											
		_2.2											
		2.4											
		_ 2.7											
		2.6											
		_											
		_2.8											
		-											
	-	_3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

ſ	LOCATION Graham St, Albert Park		Borehole Log: BH5	Logged by JI
	SURFACE ELEVATION	JOB NUMBER 210074		
	GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
	DRILL METHOD PT	DATE 27/1/2011		

			5	SAM	PLE	S	Ŧ	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with rootlets (topsoil)		_								6.5			
Red/black, sandy CLAY with ash and coke (50%)		0.2 _							18	8			Two samples taken from 0.2-0.3 mBG
Grey, silty CLAY with ash (50%)		_0.4											
Black, silty SAND with ash, coke and gravel		- 0.6								8		Hydrocarbon odour	EOH @ 0.7 mBGL, refusal
	*****	0.8											
		-											
		1.0											
		-											
		_1.2											
		1.4											
		-											
		1.6											
	-	-											
		1.8											
	-	2.0											
	-	_											
		_2.2											
		-											
		2.4											
		2.6											
		-											
		2.8											
		- 3.0											



LOCATION Graham St, Albert Park		Borehole Log: BH6	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD PT	DATE 27/1/2011		

			5	SAMPLES		t	Р	ID	р	H			
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with rootlets (topsoil)		_					D			6			
Loose, sandy GRAVEL with brick fragments		0.2											
Loose, black/yellow/brown clayey SAND		0.4 0.6					D			6.5			Two samples taken @ 0.3-0.4 mBGL
		 											Core lost between 0.7 and 1.5 mBGL
core lost		- 											
Black, clayey SAND with some rock and rootlets		- 					D						
NATURAL Orange/yellow/grey, sandy CLAY (Brighton Group sediments)		1.8 2.0					Μ			4			
		2.2 2.4 2.6 					Μ			4			
		3.0											EOH @ 3.0 mBGL

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: BH7	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD PT	DATE 27/1/2011		

			5	SAMPLES		t	P	D	р	н			
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Loose, brown, sandy LOAM with rootlets (topsoil)		- 0.2					D			6.5			
Brown/orange, sandy CLAY with gravel and coke (5%)		- 0.4								7.5			Two samples taken from 0.3-0.4 mBG
Very loose, black coke and ash		- 0.6										Slight PAH odour	
Black with some yellow, fine sandy SILT with lustrous appearance		0.8					D			8			
Yellow/brown, fine, sandy CLAY with some ash		- 1.0											
Loose, orange, silty SAND with some coke fragments		- 											
		- 1.4					D			6			EOH @ 1.5 mBGL
		_1.6											
		_											
		1.8											
	-	_											
		_2.0											
	-	-											
		_2.2											
		- 2.4											
		_											
	-	_2.6											
		-											
		_2.8											
	-	- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albet Park		Borehole Log: BH8	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD PT	DATE 27/1/2011		

			5	SAM	PLE	s	t	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with coke (5%)		_					D			6.5			
Dark brown/black/yellow, sandy SILT with some ash and coke		0.2 0.4							20	8			Two samples taken @ 0.3-0.4 mBGL
Grey, sandy GRAVEL		_											
Black/yellow/orange silty CLAY with some small coke fragments		0.6 0.8					M/D		22	8			
NATURAL White SAND with some black colouration (Port Melbourne Sands)		1.0 											
Orange and grey silty SAND		—1.2 - —1.4					D		14	4			EOH @ 1.5 mBGL
	-	1.6											
		- 1.8											
		- 2.0											
	-	- —2.2											
	-	_											
		2.4 _											
		_2.6											
		- 											
	-	- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: BH9	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD PT	DATE 27/1/2011		

			5	SAM	PLE	s	It	Р	D	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with rootlets		_					D			6.5			
Grey to brown, sandy GRAVEL with fill material and brick		0.2 0.4 0.6					D		23	8		PAH odour	
NATURAL Black/brown, fine, sandy CLAY (weathered)		 0.8 1.0					М		9.5	6			
Yellow/grey, silty SAND (Brighton Group Sediments)		 1.2 1.4				x	D		22	4			Dup1 & Split1 sampled @ 1.4-1.5 mBGL EOH @ 1.5 mBGL
		1.6 1.8 2.0 2.2 2.2 2.4 2.6 2.6 2.8 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: BH10	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD PT	DATE 28/1/2011		

			S	SAMPLES		t	Р	ID	р	Н			
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM		- 0.2					D						
Brown and yellow, sandy CLAY with minor coke and ash		0.2					D			7.5			
Loose, black coke and ash (distinctive layer)		- 0.6 _											
		0.8 											
Orange/yellow, sandy CLAY with minor ash and coke		- 					D		10.2	8			
Lesse black sitti CAND with sake and sab		- 1.4 -					М						
Loose, black, silty SAND with coke and ash (10%) Orange/yellow/brown, fine clayey SAND		1.6 					M/W		6.6	8.5			EOH @ 1.8 mBGL, refusal on gravelly concrete
		-											
		2.0											
		2.2											
		- 2.4											
		- 4.7											
		_2.6											
		_ 2.8											
		- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: BH11	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD PT	DATE 28/1/2011		

			s	SAMI	PLE	s	it	PI	D	р	Н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with bark chips Loose, grey, sandy GRAVEL		- 0.2					D						
Loose sand with black tar, ash and coke		- 0.4 -					D		21.8	8			
inclusions		0.6 0.8										Strong PAH odour to 1.6m	
Loose, brown, fine SAND		- 1.0 _											
Black, coarse grained SAND		1.2 1.4					D		2.3	8			
Whiteish orange, fine, silty SAND		- 					D/M			0			
		_ 1.0 2.0								8			
Black staining		2.2 										Slight PAH odour	
NATURAL Grey, moderately grained, weathered clayey SAND (Port Melbourne Sands)		2.4 2.6					D/M		3.34			No odour	EOH @ 2.7 mBGL
		2.8											
		_3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: BH13	Logged by SFL
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD PT	DATE 27/01/2011		

			5	SAM	PLE	s	t.	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with rootlets													
Dark brown, clayey SILT with minor ash		- 0.2 -											
Clay content increasing with an increase in ash, gravel and rubble content with some reworked natural yellow sand		0.4 0.6											
Dark brown clayey SAND with orange and red mottles													
Dark brown, coarse SAND with high ash content and gravel inclusions		- 1.0											Viscous tar @ 0.9 mBGL
		- —1.2											EOH @ 1.3 mBGL
	-	1.4											
	-	_											
	-	1.6 _											
	-	1.8											
	-	- 2.0											
		_ 2.0											
	-	_2.2											
	-	_											
		2.4											
		-											
		2.6											
		_ 2.8											
	-	- 3.0											



LOCATION		Borehole Log: BH14	Logged by VR
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD PT	DATE 27/01/2011		

			s	SAMI	PLE	s	ţ	P	ID	p	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Gravel/ bark chip surface Dark brown, LOAM with rootlets and charcoal inclusions										7.5			Slight hydrocarbon odour
Mottled brown/ yellow sandy CLAY Dark brown/ black gravelly SAND with some clay. High ash content with large coke pieces.		- - 0.4 - 0.6 - 0.8								8			Terracotta pipe
With some basalt fragments With brick fragments Light grey, reworked CLAY with minor rootlets										4			Large, very hard, vesicular coke fragment EOH @ 1.5 mBGL
		1.6 1.8 2.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: BH15	Logged by JI
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD HA	DATE 28/1/2011		

			5	SAM	PLE	s	S PID/FID		p	н			
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM with rootlets		-					D		0.7	5		Earthy odour	
Dark brown/black, silty SAND		0.2					D					Slight PAH odour	
Black, sandy CLAY with brick, ash and coke		- 0.4					M/D		1.2	8			
Yellow, fine, silty SAND		0.6											
Loose, black, coarse coke and ash (distinct layer)		— 0.8 - — 1.0					M/D		29	8		Strong PAH odour	
Grey, fine, sandy SILT with some black colourations		- 1.2 1.4					M/D		297	6.5		Very strong PAH odour	
NATURAL Yellow/grey, sandy CLAY with black colouration		- 					M/D		175				
Grey/black, silty CLAY with black colouration		- 2.2 					М					Slight PAH odour	
Grey, sandy CLAY (Port Melbourne Sands)		2.4											EOH @ 2.5 mBGL
		—2.6 - —2.8											
		- 3.0											



LOCATION		Borehole Log: BH16	Logged by VR
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD PT	DATE 10/2/2011		

			5	SAM	PLE	s	Ŧ	Р	ID	р	Н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Light grey, sandy GRAVEL							6						
Dark brown, sandy LOAM with medium plasticity		_					D						
Orange/red sandy CLAY with coke and brick fragments		0.2						42					
Brown, coarse clayey SAND with orange reworked sandy clay, coke, ash, brick fragments, minor roots and some concrete		0.4 0.6					DM	13		6			
Becoming darker with depth		0.8					DM	22					
Red bricks													EOH @ 0.9 mBGL, refusal on brick
		—1.0											



LOCATION Graham Street, Albert Park		Borehole Log: TP1	Logged by VR
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD TP	DATE 18/01/2011		

			5	SAM	PLE	s	ıt	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Loose, light yellow/grey, fine to coarse gravelly SAND		_					D		0	8			
Dark brown, silty SAND with bluestone gravel		_0.2								7.5			Some bricks encountered
Orange sandy CLAY with red/yellow/brown mottling, low plasticity and some high plasticity light grey clay with fragments of coke and charcoal		0.4 _					D/M		25.2	8.5			PVC irrigation pipe at 0.5-0.6 mBGL
		0.6											EOH @ 0.6 mBGL due to burst
	-	- 0.8											water pipe
		- 1.0											
	-	_											
	-	_1.2											
	-	-											
		1.4 -											
	-	1.6											
	-	-											
		1.8											
		- 2.0											
	-	_											
	-	_2.2											
	-	-											
		2.4 _											
	-	_2.6											
	-	-											
		_2.8											
		- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

ſ	LOCATION Graham St, Albert Park		Borehole Log: TP2	Logged by VR
ľ	SURFACE ELEVATION	JOB NUMBER 210074		
ſ	GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	• Proj. Manager DJ
	DRILL METHOD TP	DATE 18/01/2011		

			5	SAMI	PLE	s	t	P	D	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark Brown, silty, sandy LOAM (topsoil) with grass rootlets		- 0.2							53.3	8.3			
Dark brown silty, gravelly SAND with some bricks, ash, coke and reworked orange/red natural sandy clay		0.4 0.6											PVC piping @ 0.4 mBGL
		0.8 1.0 1.2							47	9			
NATURAL Red/orange, medium grained, rounded quartz SAND with some silt Pale yellowey grey, fine, silty SAND		- 								9			Old brick structure @ 1.3 mBGL Depth to natural varies from 1.3 mBGL to deeper (some brick below 1.3 mBGL)
	<u>ko di cito d</u> -	<u>1.6</u> 1.8 											EOH @ 1.6 mBGL
	-	2.0 2.2											
	-	- 2.4 -											
	-	—2.6 —2.8											
		3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

ſ	LOCATION Graham St, Albert Park		Borehole Log: TP3	Logged by VR
ľ	SURFACE ELEVATION	JOB NUMBER 210074		
ſ	GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
ĺ	DRILL METHOD TP	DATE 18/01/2011		

			5	SAMI	PLE	s	Ŧ	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, clayey, sandy LOAM (topsoil) with grass rootlets and minor coke inclusions		- 0.2							3.6	6			
Red/yellow/orange mottled sandy CLAY (reworked natural), with minor coke and brick inclusions		0.4 0.6											Black agricultural pipe at 0.5 mBGL Brick wall structure 0.5-0.9 mBGL
Black, fine ash layer		-											
NATURAL Creamy whitish grey, coarse, poorly sorted, moderately rounded SAND with high shell content.		0.8 											
Grey, moderately well sorted, moderately coarse SAND with some black colouration		_ 1.0											
(Port Melbourne sands)		—1.2 -											
		1.4 1.6							10.3	9.5			
Yellow/orange sandy CLAY with some shell fragments, (Brighton Group Sediments)		- 											
		-							4.3	9			EOH @ 2.1 mBGL
	-	2.2 _ 2.4 _											
		—2.6 — —2.8											
		- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham Street, Albert Park		Borehole Log: TP4	Logged by VR
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 18/01/2011		

			5	SAM	PLE	s	ţ	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy, silty LOAM (topsoil) with rootlets		_							3	7			
Yellow/orange sandy CLAY		0.2				x			5	7.5			Dup1 and Split1 sampled 0.25-0.3 mBGL
Dark brown, clayey SAND with spent oxides, fly ash, coke, brick and yellow sulphurous material		0.4							13	8			Depth of layers variable, forming lenses
Concrete	~~~~~	0.6											
Concrete		- - 0.8 - 1.0 - 1.2 - 1.2 - 1.4											EOH @ 0.6 mBGL, refusal on concrete
		- 1.6 _											
		— 1.8 —											
		2.0 _											
		2.2											
		_ 2.4											
		- 											
		- 2.8											
		- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

	LOCATION Graham Street, Albert Park		Borehole Log: TP5	Logged by VR
ľ	SURFACE ELEVATION	JOB NUMBER 210074		
ſ	GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	• Proj. Manager DJ
	DRILL METHOD TP	DATE 18/01/2011		

			5	SAMI	PLE	s	t	P	ID	р	H		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown LOAM (topsoil)		_							2.8	6.5			Grass surface
Dark brown clayey SAND with yellow/orange sandy clay with coke, brick and ash		_0.2											
		0.4											
		- 0.6											
SAND and black fly ash layer including		- 0.8											
charcoal,coke and clinker		-											
Loose dark grey SAND with coke fragments		1.0 _							1.5	8.5			
Ash, coke and clinker (distinct layer)		_1.2							1.5	0.0			
NATURAL Loose coarse grey/brownish well rounded SAND (Port Melbourne Sands)		- 1.4 -											
Grey/yellow/orange clayey SAND (Brighton Group Sediments)		1.6 _											
		1.8							4.5	7.5			EOH @ 1.8 mBGL
		_											
	-	_2.0											
	-	- 2.2											
	-	-											
		2.4 _											
		_2.6											
		- 											
		- 2.0											
		3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCAT	TON Graham St, Albert Park	Borehole Log: TP6	Logged by VR	
SURFA	CE ELEVATION	JOB NUMBER 210074		
GROUN	NDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL	METHOD TP	DATE 18/01/2011		

			5	SAM	PLE	s	t.	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown,sandy LOAM (topsoil) with grass rootlets		- 0.2							0.4	6.5			40cm wide concrete slab
Some yellow sandy CLAY with minor coke and brick fragments		- 							1.5	8			D/C inization size packed in first
Yellow clayey SAND with coke		_ 0.4											PVC irrigation pipe packed in fine yellow sand
Dark brown clayey SAND with high content of ash and coke		0.6 0.8							1.1				
Solidified tar		- 1.0							1.1				
Loose dark grey coarse SAND with coke, rubble, wood and spent oxides content increasing with depth		1.2 1.4 											
		1.6 							0.8	8			EOH @ 1.8 mBGL
		_											
		2.0											
		- 2.2											
		_											
		2.4											
		2.6											
	-	- 2.8											
		_ 2.0											
		3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP7	Logged by VR
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 18/01/2011		

			5	SAMI	PLE	s	t	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy LOAM (topsoil) with grass rootlets Dark brown, silty SAND with rubble including tar, coke, brick, wood, metal and clinker		- - 0.2 - 0.4 - 0.6 - 0.8 - 1.0					D		4.2	8.5		Very strong napthalene odour (continued until EOH)	40cm wide concrete slab PVC irrigation pipe packed in fine yellow sand
Dark brown coarse silty SAND with coal, bricks and large very dense metal slag content increasing with depth		- - 1.2 - 1.4 - 1.6 - 1.8					w		20 138				
Black tar semi-viscous in large clumps Solidified tar Black coarse clayey SAND with high sticky tar content		- -2.2 - -2.2 - -2.4 - -2.6											
Light grey clayey fine SAND with some black staining.		- 					М			6			Free water encountered EOH @ 3.0 mBGL

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

	LOCATION Graham St, Albert Park		Borehole Log: TP8	Logged by VR
ľ	SURFACE ELEVATION	JOB NUMBER 210074		
	GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
	DRILL METHOD TP	DATE 18/01/2011		

			5	SAMI	PLE	s	t	Р	ID	р	Н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown,loose sandy LOAM (topsoil) with grass rootlets		- 0.2					D		16	8		No Odour	
NATURAL Light sandy CLAY		0.4											
Yellow/orange sandy CLAY (Brighton Group Sediments)		- 0.6					М		0.8	8			Dup 2 & Split 2 EOH @ 0.8 mBGL
		0.8											
		- 1.0											
		_											
		_1.2											
		-											
		1.4											
	-	- 16											
	-	1.6											
		1.8											
		_											
		2.0											
		_											
	-	2.2											
		-											
		2.4											
		_ 2.6											
		_											
		2.8											
		- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP9	Logged by SF
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gaswork	s Proj. Manager DJ
DRILL METHOD TP	DATE 19/01/2011		

			5	SAM	PLE	s	Ŧ	Р	D	p	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown,loose sandy LOAM (topsoil) with grass rootlets and chipbark		- 0.2					М		14	7.5			
Moist, grey, brown, orange clayey coarse SAND.		- 											
Soft, loose, dark brown/ grey clayey SAND		- 					М		37	8.5			
Loose black ash and coke with minor brick (Gasworks fill)		- 					D		24	8		Mild PAH odour	
		- 											EOH @ 1.0 mBGL, refusal on brick footing
	-	- —1.2											
	-	- 1.4											
	-	- 1.6											
	-	- —1.8											
	-	- 2.0											
	-	- 2.2											
	-	- 2.4											
	-	- 											
	-	- 2.8 -											
	-	_3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP10	Logged by SF
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD TP	DATE 19/01/2011		

			5	SAM	PLE	s	L.	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown,loose sandy LOAM (topsoil) with grass rootlets		_ 0.2					М			7.5			NOTE: Unusually High PID readings
Moist brown, sandy silty CLAY with 10% slag inclusions		0.4					М		320	7			Brick lined drain base & walls wide
Brown sandy CLAY with brick,wood, large clusters of coke and slag		0.6 0.8 											filled with ballast, running parallel to park perimeter (E-W) 5m from southern boundary
		1.0 1.2 1.4					D		110	7		Cresote Odour	
Sandy CLAY with large concrete and brick footing		1.6 1.8 											
Ballast (50-100mm))		2.0 2.2 24											Potential perched water with a hydrocarbon sheen EOH @ 2.4 mBGL, refusal on base of drain
		_ 2.6											
		- 											
		_ 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP11	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD TP	DATE 19/01/2011		

			5	SAMI	PLE	s	t	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown,loose sandy clayey LOAM with grass rootlets (topsoil)		- 0.2								6.5		Earthy Odour	NOTE: Unusual PID readings
Dark brown silty CLAY		- 							23	8			
Dark brown, silty sandy CLAY with bricks and minor coke		0.6 0.8 1.0 										Slight odour from 1m PAH/Tar	
Coarse sand layer with some orange/yellow/red sandy CLAY (re-worked Brighton Group)		— 1.2 - — 1.4					М		40	5			
Hard tar layer (not viscous)		— 1.4 — —1.6											Digging stepped back in order to avoid hard layer
Yellow/grey stained CLAY with fine sand Mottled blue/grey Port Melbourne sands		- 											
		_ 2.0					М		130	6			EOH @ 2.1mBGL (Pipes on either side, natural but stained (PM sands reached))
		2.2 											
		2.4 											
		—2.6 —											
		2.8 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

ſ	LOCATION Graham St, Albert Park		Borehole Log: TP12	Logged by DJ
	SURFACE ELEVATION	JOB NUMBER 210074		
ſ	GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
	DRILL METHOD TP	DATE 19/01/2011		

			5	SAM	PLE	s	ţ	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
Fill Loose, dark brown sandy SILT with rootlets										6.5		No odour in topsoil	
Medium dense, dark brown, sandy CLAY with brick, rubble and minor coke pieces		0.2							122	8			Iron construction debris @ 0.2 mBGL
Dark brown silty SAND with high brick and concrete content with black staining and minor yellow/orange sandy CLAY		0.6 0.8 1.0							131	8		Slight odour in the rubble	
Light yellowish brown SAND with rubble and coke pieces up to 300mm in size		1.0 1.2 1.4										Otera a DALLa do un till	Desistance on brick laws
Moist, dark greyish yellow, coarse SAND with some clay, grey staining and ash		- 1.4 - 1.6 - 1.8					М		147*	4		Strong PAH odour till EOH	Resistance on brick layer (foundations?) 2 pipes 700mm diametre running towards E-W * soil caught in PID probe, causing unusually high readings
		 											EOH @ 1.8 mBGL due to large pipes obstructing digging. Port Melbourne Sands reached (though stained)
		2.2 2.4 											
		—2.6 — —2.8											
		3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP13	Logged by VR
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD TP	DATE 19/01/2011		

	SAMPLES		5	SAM	PLE	s	Ŧ	Р	D	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, sandy loam		-							3.8	6		No odour	Grass surface
Dark brown, silty CLAY with brick fragments		0.2							4.8	8		No odour	
Yellow/orange sandy CLAY with red/white mottles, some brick fragments and minor coke		0.4 0.6							1.0	0			Concrete slab- moved digger forwards
Loose, dark brown-black ash and coke layer, with minor coarse sand		_ 0.8							4.9	8		Possible slight odour	1.5m long, 700mm diameter pipe (cast iron?) dug up. Full of ash
Dark brown/black, coarse, silty SAND with some small charcoal pieces (lightweight)		- 											
		—1.2 - —1.4 -											
Grey brown colouration Lighter brown, coarse SAND with some clay		1.6 					М					Strong PAH odour	PVC piping
inclusions and coke/ash		2.0										Strong odour	r vo piping
NATURAL Dark blue-grey (stained), coarse, well rounded, clayey SAND with some fine, light grey sand		- 2.2					М		70*	7.5			
Light creamy grey, silty SAND with some black staining (Port Melbourne Sands)		2.4							70	4 (?)		Slight PAH odour	PID may not have read correctly
		- 2.6											EOH @ 2.4 mBGL
		- 2.8 											
		3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham Stree, Albert Park		Borehole Log: TP14	Logged by VR
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD TP	DATE 19/01/2011		

			5	SAM	PLE	s	t	Р	ID	p	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark greyish brown sandy LOAM with minor light cream coloured sand Fine, uniform cream coloured SAND Dark brown, silty SAND with angular basalt and gravel Clayey, sandy LOAM with red brick fragments		- 					М		15	7.5-8		Normal earthy odour	Patchy grass cover
Yellowish brown SAND with clusters of yellow clay. Large lenses of stiff, mottled orange/brown sandy CLAY inclusions		_ 0.6				x			23.2	8.5-9	I	Normal clay odour	Dup3 & Split3 sampled @ 0.5-0.6 mBGL
Loose, dark brown/black moderately coarse SAND with high ash and coke content		- 					М		108	6.5*		Strong PAH odour	Concrete footing @ 0.8 mBGL, moved pit slightly to one side * pH ranged from 6.5 to higher values
NATURAL Soft, fine, light grey SAND with some yellow		1.0 1.2										Slight PAH odour	large steel/iron pipe @ 0.9 mBGL
clayay sand and trace black staining Gradual change to orange/yellow fine to very fine SAND		- 1.4											
(Port Melbourne Sands)		1.6 							7.9	8			EOH @ 1.8 mBGL
		 2.0											
		- 2.2 											
		2.4											
		—2.6 - —2.8											
		- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham Street, Albert Park		Borehole Log: TP15	Logged by VR
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 19/01/2011		

			s	SAM	PLE	s	Ţ.	Р	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Brown, sandy LOAM		_								5			Note: PID re-calibrated
Brown, clayey, loamy SAND with clusters of dark yellow clay		0.2											
		_0.4											
Stiff, low plasticity yellow/orange sandy CLAY with light grey and red mottles. Coarse well rounded sand. (reworked Brighton group)		- 0.6 _							2.1	6			
With some coke and clinker inclusions		0.8 											Agricultural pipe @ 0.9 mBGL
Dark grey (stained), coarse SAND with high shell content, some black ash. (reworked Port Melbourne sands)		1.0 _					Μ		1.1	8		'Cresote' PAH odour	
Loose, coarse SAND with a high content of ash and coke (generally <50mm)		1.2 _											
		1.4 -											
		1.6											
		1.8											
		_2.0											
		2.2											
NATURAL		- 2.4					М		0.8	4.5			EOH @ 2.5 mBGL
Pale grey, poorly sorted, coarse SAND with some dark yellow clay nodules and natural organic matter	<u>, 11 </u>	_2.6											
	-	- 2.8											
		- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

ſ	LOCATION Graham St, Albert Park		Borehole Log: TP16	Logged by JI
	SURFACE ELEVATION	JOB NUMBER 210074		
ſ	GROUNDWATER	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
	DRILL METHOD TP	DATE 19/01/2011		

			5	SAMPLES		t	P	D	р	н			
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, clayey sandy LOAM		- 0.2					D M		1.0	5.5		Earthy odour	
Mottled orange/red/brown sandy CLAY with brick, fill, coke and ash (50%)		- -0.6					М		2.4	8		No odour	
		- 0.8 											
Loose, black ASH with slag		1.0 1.2 					D		1.6	9		Slight PAH odour	
		— 1.4 - — 1.6											
Black ash with some grey sand		1.8					M/W					Slight PAH odour	Perched groundwater in this layer
NATURAL Light brownish grey, sandy CLAY		- 					M/W		1.5	4.5		Silgiit PAn odoui	EOH @ 2.2 mBGL
		- 2.4											
		- 2.6											
		2.8 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP17	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD TP	DATE 20//01/2011		

			5	SAMPLES		Ţ	Р	ID	p	н			
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Loose, brown, sandy LOAM (topsoil)						Х	D		11	6.5		No odour throughout	Dup4 & Split4 sampled @ 0.0-0.1 mBGL
Firm, dark brown CLAY with brick, coke and ash inclusions		0.2 0.4 0.6					D			6			
Ash and coke layer		 0.8											
Firm, brown, stiff CLAY with brick, ash, coke and slag inclusions.		1.0 1.2 1.4					D		9	6.5			Storm water pipe encountered, possible historic infrastructure
		 1.6 1.8											
NATURAL Loose, light brown SAND with minor orange colouration (Port Melbourne sand)		_ 2.0 2.2					D		9	4.5			EOH @ 2.3 mBGL
		2.4											
		_ 2.6											
		_ 2.8											
		3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP18	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 20/01/2011		

			5	SAMPLES		t	P	D	р	H			
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Brown, sandy LOAM topsoil		- 0.2							8.0	6.5		No odour throughout	
Dark brown CLAY with rootlets, ash, coke and brick inclusions		_								7.5			
Minor spent oxides (blue)		0.4 0.6											
Loose SAND with gasworks rubble/waste: bricks, spent oxides, ash, coke and slag		- -0.8 - -1.0 - -1.2 - -1.2 - -1.4 - -1.6 - -1.8 - -2.0							12.0	6			
Loose, light brown SAND with minor orange colouration (Port Melbourne sand)		- 											Couldn't get clean sample EOH @ 2.5 mBGL
	<u>eresteilteile</u> - -												

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP19	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 21/01/2011		

			SAMPLES		t	Р	D	р	н				
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Chipbark Brown, sandy LOAM topsoil Dark brown CLAY with high brick content, minor ash and coke		- 0.2							1.9	7		No odour	
Coke, ash and slag (separate layer)		- 							10	7 5.5		Minor PAH odour	EOH @ 0.6 mBGL, refusal on concrete slab
		0.6 0.8 1.0 1.2 1.4 1.6 1.6 1.8 2.0 2.2 2.2 2.2											
		- 2.8 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP20	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 20/01/2011		

			s	SAM	PLE	s	t	P	ID	p	Н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Chipbark Brown, sandy LOAM topsoil Dark brown CLAY with high brick content, minor coke and ash		- 0.2 _					D		0.6	7.5		No odour	
Black coke, ash and slag (distinct layer)		0.4 0.6					D		2	4.5		No odour	
Pale blue spent oxides		0.8 					D		2.2	4.5		Minor PAH odour	
Ash, fly ash, charcoal, and gasworks rubble/waste (distinct layer)		- - 1.2 - 1.2 - 1.4 - 1.6 - 1.8 -											
Orange/yellow sandy CLAY (Brighton group sediments)		2.0 <u>2.2</u>					D		1.5	4		No odour	EOH @ 2.2 mBGL
		2.4 2.6 2.6 2.8 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham Street, Albert Park		Borehole Log: TP21	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 20/01/2011		

			5	SAM	PLE	s	Ŧ	P	ID	р	Н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, silty LOAM (topsoil) with rootlets		- 0.2					М		0.4	7.5		No odour	
Dark brown CLAY with coke and ash		0.4 0.6							0.4	8			
ASPHALT		— 0.8 — 1.0							0.7	8		PAH odour	EOH @ 1.1 mBGL Refusal on building footings/asphalt
		—1.2 -											
		1.4 1.6											
		1.8											
		- 2.0											
		2.2 _											
	-	2.4 2.6											
	-	— 2.6 — —2.8											
		- 3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham Street, Albert Park		Borehole Log: TP22	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
DRILL METHOD TP	DATE 20/01/2011		

			5	SAM	PLE	s	t	P	ID	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Dark brown, silty LOAM (topsoil), with rootlets		_					D		2.4	6.5		No odour	
Firm, brown CLAY with coke, ash and brick		0.2											
Orange/yellow sandy CLAY (reworked Brighton Group Sediments)		_0.4					M1		2.2	7.5			
SAND with coke, ash, slag and gasworks waste		- 					D		2.1	8.5		Miner DALL edeur	
Bricks, increase in coke content		0.8 1.0 1.2										Minor PAH odour	
Becoming lighter in colour, increase in ash content		- 1.2 - 1.4 - 1.6 - 1.8 - 2.0 - 2.2										No odour	
NATURAL Orange/yellow, sandy CLAY (Brighton Group Sediments)		- 2.4				x	M1		3.1				Dup5 & Split5 sampled @ 2.4-2.5 mBGL
		—2.6 -											EOH @ 2.5 mBGL
	-	2.8 _											
	-	_3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP23	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 20/01/2011		

			5	SAM	PLE	s	t	P	D	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Crushed rock		_					D			7.5-8		No odour	
Brown, silty SAND with some brown clay nodules, brick, coke, fly ash, slag and concrete		_0.2											
		- 0.4					_					Mild PAH odour	
		- 					D			8			
		- 0.0											
		0.8											
		1.0					D			8.5			
		- —1.2					U			0.5			
		-											
		1.4 _											
		_1.6											
Light grey Ash		- 1.8											
Light grey Ash		-											
		2.0 _											
		_2.2											
		2.4											
		- 											
		-											
		_2.8											EOH @ 2.9 mBGL
	-	_3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP24	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 20/01/2011		

			s	SAM	PLE	s	t	P	ID	р	H		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL Chipbark Firm, dark brown clayey LOAM Sandy CLAY (reworked Brighton Group Sediments)		0.2 0.4					D			6.5		No odour	
Ash, coke and slag (distinct layer)		 0.8					D			8		No odour	
		- 					D		2.6	7.5-8	3	PAH odour	
NATURAL Port Melbourne Sands (Possibly Brighton Group Sediments)		1.6 1.8 2.0 2.0					D					No odour	EOH @ 2.2 mBGL
		2.4 2.4 2.6											
		—2.8 - —3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

LOCATION Graham St, Albert Park		Borehole Log: TP25	Logged by DJ
SURFACE ELEVATION	JOB NUMBER 210074		
GROUNDWATER NGWE	DATUM	PROJECT: Sth Melbourne Gasworks	s Proj. Manager DJ
DRILL METHOD TP	DATE 20/01/2011		

			5	SAM	PLE	s	Ŧ	Р	ID	р	Н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL													
Chipbark Dark brown, silty sandy LOAM (topsoil)		_ 0.2				х	D			8			Dup6 & Split6 sampled @ 0.1-0.2 mBGL
Coke and ash (distinct layer)		- 0.4 											
Sandy CLAY with coke, brick and ash inclusions (reworked natural Brighton Group Sediments)		0.6 0.8					D			7-8			
Ash and coke (distinct layer)		_ 1.0											
NATURAL Light brown SAND	777	_ 1.2								_			
Sandy CLAY (Brighton Group Sediments)		- 1.4 					D			6		No odour	
		1.6											EOH @ 1.6 mBGL
		- 											
		_ 2.0											
		-											
		2.2 _											
		2.4											
		_ 2.6											
		-											
		2.8 _											
		3.0											

ENVIRONMENTAL EARTH SCIENCES THE KNOW AND THE HOW

ſ	LOCATION Graham St, Albert Park		Borehole Log: TP26	Logged by DJ
	SURFACE ELEVATION	JOB NUMBER 210074		
	GROUNDWATER	DATUM	PROJECT: Sth Melbourne Gasworks	Proj. Manager DJ
	DRILL METHOD TP	DATE 20/01/2011		

			s	SAM	PLE	s	t	P	D	р	н		
STRATIGRAPHY	GRAPHIC LOG	Depth metres	Disturbed	Undisturbed	Lost	Duplicate	Moisture Content	Background	Reading	pH - soil	pH - water	Odour	Comments
FILL													
Chipbark Light brown crushed rock		- 0.2					D			8			PID not reading correctly
Sandy CLAY with high coke, ash and slag content and minor liquid tar		- 0.4											
Large pieces of coke fragments		0.6 					M1			8			
		0.8 _											
		1.0 _											
NATURAL Grey sandy CLAY with yellow mottles (Brighton Group Sediments), visible tar impact decreasing		—1.2 -										Highly odourous	
with depth		1.4 _											
		1.6 1.8											Dup7 & Split7 sampled @ 1.7-1.8 mBGL
		- - 2.0				х	M1			8			Highly impacted material
		- 2.4											
		- <u>2.6</u>					M1			6.5			EOH @ 2.6 mBGL
		- 2.8											
		- —3.0											