

TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 22
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Dark grey-brown gravelly silt with some sand and clay, gravel generally comprising ash and metal, moist		D,PID	0.15		<1 ppm					
	0.4	FILLING - Very stiff, grey-dark grey clay with some silt, trace to some fine to coarse grained gravel including coal and ash and gloss and porcelain inclusions, M>Wp		D,PID,pp	0.5		<1 ppm, 220-270 kPa					
	0.7	CLAY - Hard, light grey mottled orange clay, M>Wp		D,PID,pp	0.9		<1 ppm, >400 kPa					
1								1				
	1.4	CLAYSTONE - Extremely low strength, extremely weathered, grey mottled orange claystone										
		from 1.8m, very low strength, highly weathered										
2								2				
		from 2.3m, extremely low strength, extremely weathered										
	2.6	CLAYEY SILT - Dark grey-black clayey silt (extremely weathered coal)		D	2.7							
3								3				
	3.2	CLAYSTONE - Extremely low strength, extremely weathered, grey claystone										
	3.4	Pit discontinued at 3.4m, limit of investigation										
4								4				

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 23
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Grey-brown clayey silt with some fine to coarse grained subangular gravel, including trace coal and brick fragments, moist		D,PID	0.1		<1 ppm					
	0.4	frm 0.3m, increased gravel content, some cobbles to 200mm										
		FILLING - Hard grey clay with some silt and trace fine to medium grained subangular gravel, M<Wp		D,PID,pp	0.5		<1 ppm, >400 kPa					
	1	from 0.9m, intermixed grey and light grey clay, increased gravel content		D,PID,pp	1.0		<1 ppm, >400 kPa	1				
	1.4											
		SAND - Grey mottled fine to coarse grained sand with some clay and fine grained gravel, moist		D,PID	1.5		<1 ppm					
	1.65											
	1.8	CLAY - Very stiff, light grey clay with some fine to medium grained subangular gravel, M<Wp		pp	1.7		240-280 kPa					
	2	CLAY - Very stiff laminated grey and dark grey-black organic clay with some silt, M>Wp		D,PID,pp	2.0		<1 ppm, 240-280 kPa	2				
		from 2.6m, grading into extremely weathered carbonaceous siltstone and coal										
	3											
	3.0	Pit discontinued at 3.0m, limit of investigation										
	4											

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 23A
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Dark grey-brown slightly clayey silt with some fine to coarse grained gravel (coal, ash, and carbonaceous siltstone), and brick and glass inclusions, moist from 0.4m, increased clay content										
1	1.0	FILLING - Loose, brown clayey fine to coarse grained gravel with numerous timber, brick and glass bottle inclusions, slight hydrocarbon colouration, saturated from 1.5m, increased clay content		D,PID	1.5		<1 ppm	 1				
2	2.0	Pit discontinued at 2.0m, pit walls collapsing						2				
-3								3				
-4								4				

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: Free groundwater observed at 1m

REMARKS: Within filled pit

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	SL	Standard penetration test
U _t	Tube sample (x mm dia.)	P	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬆	Water level

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SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 24
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.3	FILLING - Grey-brown clayey silt with some fine to coarse grained subangular gravel, humid from 0.1m, clay and gravel content increasing		D,PID	0.1		<1 ppm					
	0.65	FILLING - Grey clay, fine to coarse grained subangular gravel, cobbles and boulders to 300mm, damp		D,PID,pp	0.7		<1 ppm, 190-300 kPa					
	1	0.9	FILLING - Grey mottled orange clay with trace fine to coarse grained subangular gravel and cobbles to 200mm, M>Wp									
		CLAYSTONE - Extremely low strength, highly weathered, light grey mottled orange claystone, fractured with some low strength boulders										
		from 1.5m, very low strength										
2	2.0	Pit discontinued at 2.0m, refusal							2			

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⚡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal and Allied
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 25
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	CLAYEY SILT - Grey clayey silt with some fine to coarse grained subangular gravel, damp		D/PID	0.1		<1					
		CLAY - Hard grey mottled orange clay with some fine to coarse grained subangular gravel, m < Wp		D/PID	0.3		<1 >400 kPa					
		from 0.6m, light grey mottled orange, increased gravel content										
		from 0.9m, grading into claystone										
1								1				
	1.4	CLAYSTONE - Extremely low strength, extremely weathered ligh grey mottled orange claystone										
		from 1.9, very low strength										
2								2				
	2.6	Pit discontinued at 2.6m, refusal										
3								3				

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS: No apparent slope failure

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 26
PROJECT No: 39663C
DATE: 26 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	CLAYEY SILTY SAND - Brown clayey silty fine to medium grained sand with some fine to medium grained subangular and subrounded gravel (possible fill), moist		D,PID	0.15		<1 ppm					
	0.35	SILTY SAND, GRAVEL AND COBBLES - Light grey silty fine to coarse grained sand, subangular gravel and cobbles to 250mm (extremely weathered sandstone, possible fill), humid		D,PID,pp	0.4		<1 ppm, >400 kPa					
	0.5	CLAY - Hard, grey mottled orange clay with trace fine grained subangular gravel, M<<Wp										
		CLAYSTONE - Very low strength, highly weathered, light grey claystone, highly fragmented, silty in parts										
	1											
	1.9	COAL/CLAYSTONE - Extremely low strength, extremely weathered brown, yellow-brown, dark grey-black and light grey claystone and coal		D,PID,pp	2.0		<1 ppm, 180-340 kPa					
	2	from 2.3m, light grey										
	2.7	CLAYSTONE - Very low strength, highly weathered grey claystone, fragmented										
	3	Pit discontinued at 3.0m, limit of investigation										
	3.0											
	4											

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
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LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 27
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.12	FILLING - Brown clayey silt with some fine to medium grained sand and trace fine to medium grained subangular gravel (chitter), moist		D,PID	0.2		<1 ppm					
	0.35	FILLING - Grey-brown coal reject generally comprising 55% carbonaceous siltstone, 40% clay, 5% coal, damp		D,PID	0.5		<1 ppm					
		FILLING - Orange-brown clay, fine to coarse grained subangular gravel and cobbles to 150mm (ripped claystone/siltstone), moist										
		from 0.8m, grey-brown some boulders to 350mm										
		from 1.2m, grey, increased clay content		D,PID	1.25		<1 ppm					
	1.65	FILLING - Stiff to very stiff, grey to dark grey slightly silty clay with some fine to coarse grained subangular gravel, M>>Wp		D,PID,pp	1.8		<1 ppm, 140-200 kPa					
	2.1	CLAY - Very stiff, grey mottled orange clay, M>Wp		D,PID,pp	2.3		<1 ppm, 200-300 kPa					
	2.6	CLAYSTONE - Extremely low strength, highly weathered, light grey mottled pink-orange claystone										
	3.0	Pit discontinued at 3.0m, limit of investigation										

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



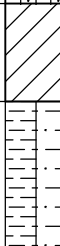
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TEST PIT LOG

CLIENT: Coal and Allied
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 28
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)				
				Type	Depth	Sample	Results & Comments		5	10	15	20	
-	0.05	FILL - Brown silt with abundant organics, moist		D/PID	0.3		<1						
		FILL - Light grey / brown clayey, fine to coarse grained subangular gravel, cobbles and boulders to 250mm (ripped claystone), damp											
	1		D/PID	1.0		<1	1						
	1.3	FILL - Hard grey mottled orange / red clay with some fine to coarse grained subangular gravel, m ≪ Wp (possible natural)		D/PID pp	1.6		<1 >400 kPa						
	1.9	SANDY SILT - Grey mottled orange / red sandy silt, humid		D/PID	2.0		<1						
	2.1	CLAY - Hard grey mottled orange / red clay with some silt, m ≪ Wp											
2.3	CLAYSTONE / SILTSTONE - Low strength, moderatly weathered grey mottled orang claystone / siltstone, fragmented		pp	2.2		>400 kPa							
2.6	Pit discontinued at 2.6m, refusal												
3													

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (Is/50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 29
PROJECT No: 39663C
DATE: 26 Oct 07
SHEET 1 OF 1

[illegible]

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Sandstone boulder outcropping at northern end of pit

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	SL	Standard penetration test
U _t	Tube sample (x mm dia.)	P	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬆	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal and Allied
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 30
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

[illegible]

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	SL	Standard penetration test
U _t	Tube sample (x mm dia.)	P	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬆	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal and Allied
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 31
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

[illegible]

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND		
A	Auger sample	pp Pocket penetrometer (kPa)
D	Disturbed sample	PID Photo ionisation detector
B	Bulk sample	S Standard penetration test
U	Tube sample (x mm dia.)	PL Point load strength (Is/50) MPa
W	Water sample	V Shear Vane (kPa)
C	Core drilling	▷ Water seep
		Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 32
PROJECT No: 39663C
DATE: 26 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Grey-brown clayey silt with trace fine to medium grained subangular gravel (including coal), humid		D,PID	0.1		<1 ppm					
	0.55	CLAY - Hard, grey mottled orange-red clay with some roots and rootlets in upper 500mm, M < Wp		D,PID,pp	0.6		<1 ppm, >400 kPa					
	1											
		from 1.5m, grading into claystone		D,PID,pp	1.1		<1 ppm, >400 kPa					
	1.7	CLAYSTONE - Very low strength, highly weathered, grey mottled orange claystone, highly fragmented										
	2	from 2m, low strength										
	2.3	Pit discontinued at 2.3m, refusal										
	3											
	4											

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal and Allied
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 33
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILL - Intermixed clay, silty sand, fine to coarse grained subrounded gravel and cobbles to 150mm with asphalt inclusions, damp		D/PID	0.2		<1					
	0.35	SANDY SILT - Grey / brown sandy silt, humid at 0.4m, root		D/PID	0.5		<1					
	0.7	SILTY SANDSTONE - Very low strength, highly weathered orange silty sandstone, clayey in parts										
1	1.0	Pit discontinued at 1.0m, refusal										
2												
3												

RIG: JCB 3CX Backhoe, 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS: within fill stockpile

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



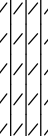
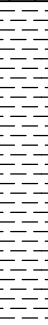
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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
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LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 34
PROJECT No: 39663C
DATE: 26 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		CLAYEY SILT - Grey clayey silt with some fine to medium grained sand, damp from 0.1m, light grey, humid		D,PID	0.2		<1 ppm					
	0.5	CLAY - Hard grey mottled orange clay, M<Wp		pp	0.6		>400 kPa					
		from 0.8m, some silt and sand										
	1											
	1.4	CLAYSTONE - Extremely low strength, extremely weathered, light grey mottled orange claystone, fragmented										
	2											
	2.5	Pit discontinued at 2.5m, limit of investigation										
	3											
	4											

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 35
PROJECT No: 39663C
DATE: 26 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		CLAYEY SILT - Grey-brown clayey silt with trace fine to medium grained subangular gravel, including coal (disturbed / possible fill), moist		D,PID	0.1		<1 ppm					
		from 0.3m, light grey, some fine to medium grained sand, humid		D,PID	0.4		<1 ppm					
	0.6	CLAY - Hard, grey mottled orange-red clay with some fine to medium grained subangular gravel, M<Wp		D,PID,pp	0.7		<1 ppm, >400 kPa					
	1											
	2											
	2.5	Pit discontinued at 2.5m, limit of investigation										
	3											
	4											

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
			Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 36
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		SILT - Light grey-brown silt, damp										
	0.4	CLAY - Hard, red-brown clay, M<Wp		D,PID,pp	0.5		<1 ppm, >400 kPa					
	1	from 1m, grey mottled pink										
	2	from 1.8m, grey mottled orange, some ironstaining, grading into extremely weathered claystone										
	2.2	Pit discontinued at 2.2m, limit of investigation										
	3											
	4											

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: Appears to be within pothole, clay profile curves into depression (see photos)

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 37
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.3	FILLING - Grey-brown silty clay, M<Wp (possible fill)		D,PID,pp	0.1		<1 ppm, >400 kPa					
		FILLING - Intermixed grey-brown and grey mottled orange clay with trace fine to medium subangular gravel, M>Wp		D,PID,pp	0.6		<1 ppm, >400 kPa					
	1			D,PID	1.1		<1 ppm	1				
	1.5	SILTY CLAY - Stiff to very stiff, grey-brown silty clay with some fine grained sand and rootlets, M>Wp		D,PID,pp	1.7		<1 ppm, 150-220 kPa					
	2							2				
	2.4	SANDY CLAY - Stiff to very stiff, grey, mottled orange sandy clay with some silt, M>Wp		D,PID,pp	2.6		<1 ppm, 170-250 kPa					
	2.9	SILTSTONE - Low strength, moderately weathered, dark grey carbonaceous siltstone						3				
	3.1	Pit discontinued at 3.1m, limit of investigation										
	4							4				

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	SL	Standard penetration test
U _t	Tube sample (x mm dia.)	P	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬆	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 38
PROJECT No: 39663C
DATE: 26 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILLING - Grey silty sandy fine to coarse grained subangular and subrounded gravel and cobbles to 200mm (claystone and some coal), with some clay, humid		D,PID	0.4		<1 ppm					
		FILLING - Orange-brown sandy fine to medium grained subangular and subrounded gravel (ripped sandstone / conglomerate), humid										
	0.65	FILLING - Grey, fine to coarse grained subangular gravel, cobbles and boulders to 450mm with trace clay (ripped claystone), humid										
	1			D,PID	1.45		<1 ppm					
		from 1.4m, grey-brown, increased clay content, trace coal										
	1.7	FILLING - Grey-yellow and black clayey fine to coarse grained gravel and cobbles to 200mm (burnt coal reject), generally comprising 40% ash / coke, 25% claystone / siltstone, 25% clay										
	2			D,PID	1.9		3.2 ppm					
	2.4	Pit discontinued at 2.4m, refusal										
	3											
	4											

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Refusal on possible claystone bedrock

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 39
PROJECT No: 39663C
DATE: 26 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.05	FILLING - Grey-brown clayey sandy silt with some fine to medium grained subangular and subrounded gravel, damp		D,PID,pp	0.2		<1 ppm, >400 kPa					
		FILLING - Hard, grey-brown silty sandy gravelly clay, M<<Wp										
	0.65	from 0.6m, timber post and metal frame 1.2m in length										
		FILLING - Dark grey clay and fine to coarse grained gravel and cobble (to 150mm) sized coal reject, generally comprising 50% clay, 30% coal, 20% carbonaceous siltstone										
	1	at 1m, metal turbine										
				D,PID	1.3		4.3 ppm					
	1.45	FILLING - Orange-brown clayey gravelly fine to medium grained sand (ripped sandstone), moist		D,PID	1.6		<1 ppm					
	1.7	FILLING - Grey fine to coarse grained subangular gravel, cobbles and boulders to 500mm with some clay (ripped claystone), moist										
	2	from 1.8m to 2.6m, light grey-brown fine to medium grained sand pocket in southern edge of pit		D,PID	2.0		<1 ppm					
	2.6	FILLING - Dark grey clayey fine to coarse grained subangular gravel (including claystone, carbonaceous siltstone and trace coal), moist to wet		D,PID	2.8		<1 ppm					
	3											
	3.1	Pit discontinued at 3.1m, limit of investigation										
	4											

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 40
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Brown silty fine to medium grained sand with some fine to medium grained subangular gravel (carbonaceous siltstone and gravel), and clay clumps, damp		D,PID	0.2		<1 ppm					
	0.5	FILLING - Stiff to very stiff, grey and grey-brown clay with some subangular gravel and cobbles to 200mm (ripped claystone and siltstone), M>Wp		D,PID,pp	0.7		<1 ppm, 160-220 kPa					
	1			D,PID	1.2		<1 ppm					
	2											
	2.6	GRAVELLY CLAY - Firm to stiff, grey gravelly clay, generally comprising fine to medium grained subangular and subrounded gravel, M>>Wp		pp	2.8		70-170 kPa					
	3.0	Pit discontinued at 3.0m, limit of investigation										
	3											
	4											

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 41
PROJECT No: 39663C
DATE: 25 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILLING - Grey silt, clay and fine to coarse grained subangular gravel, humid		D,PID	0.1		<1 ppm					
		FILLING - Light grey-brown clayey fine to coarse grained subangular gravel, cobbles and boulders to 300mm (ripped claystone, trace coal), humid										
	1	from 1m, increased clay content (stiff to very stiff, M>Wp)		D,PID,pp	1.1		<1 ppm, 180-240 kPa	1				
		from 1.6m, grey-brown to dark grey										
	2			D,PID	2.0		<1 ppm	2				
	3							3				
	3.3	Pit discontinued at 3.3m, limit of investigation										
	4							4				

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 42
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Intermixed hard grey clay (M<<Wp), silty sand and subangular gravel, cobbles and boulders to 300mm (ripped claystone, sandstone, trace coal, cobbles), some rootlets, humid		D,PID	0.2		<1 ppm					
	1	from 0.9m to 1.5m, asphaltic concrete, possibly containing coal tar and slag surrounding wooden column / pile in slightly weathered edge of pit, slight PAH odour						1				
		from 1.2m, intermixed grey mottled orange clay, M> Wp, and subangular gravel, cobbles and boulders to 400mm (ripped claystone, possibly natural in northern end of pit)		D,PID	1.2		4.6 ppm					
	1.9											
	2	CLAYSTONE - Very low strength, highly weathered, claystone, fragmented						2				
		timber column to 2.5m adjacent to edge of pit, with more coal tar at base										
	2.8											
		Pit discontinued at 2.8m, refusal										
	3							3				
	4							4				

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS: See photos, also former borehole evident

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 43
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Intermixed hard, grey lay (M<<Wp), gravel and cobbles to 200mm (ripped claystone and siltstone)		D,PID,pp	0.1		<1 ppm, >400 kPa					
	0.5	FILLING - Intermixed stiff grey mottled orange clay, gravel and cobbles to 200mm (ripped claystone, siltstone and trace coal)		D,PID,pp	0.6		<1 ppm, 120-170 kPa					
1	1.0	CLAYSTONE - Extremely low strength, extremely weathered, grey mottled orange claystone, fractured with some clay lenses		D,PID	1.1		<1 ppm	1				
	2							2				
	2.5	Pit discontinued at 2.5m, refusal on medium to high strength claystone										
	3							3				
	4							4				

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
			Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 44
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.05	FILLING - Dark grey coal reject and sandy silt, generally comprising 50% sandy silt, 40% carbonaceous siltstone and 10% coal, humid		D,PID	0.1		<1 ppm					
	0.35	FILLING - Orange sandy fine to coarse grained subangular and subrounded gravel with some cobbles to 100mm and trace clay, damp		D,PID	0.5		5.4 ppm					
		FILLING - Dark grey-black coal reject, generally comprising 70% carbonaceous siltstone, 15% clay, 15% coal		D	0.6							
					0.8							
	1.1	CLAY - Stiff to very stiff, grey clay with some organics, (roots), and cobbles to 150mm in upper 0.4m, M>Wp		D,PID,pp	1.2		<1 ppm, 160-240 kPa					
	2.1	CLAYSTONE - Extremely low strength, extremely weathered, grey mottled orange claystone, grading into siltstone										
	3.0	Pit discontinued at 3.0m, limit of investigation										

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 45
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Intermixed hard grey clay (M<Wp), and subangular gravel, cobbles and boulders to 300mm (claystone, sandstone, trace coal)		D,PID,pp	0.2		<1 ppm, >400 kPa					
		from 0.5m, stiff to very stiff, M>Wp		D,PID,pp	0.7		<1 ppm, 150-220 kPa					
1												
2				D,PID	2.0		<1 ppm					
3												
	3.1	Pit discontinued at 3.1m, limit of investigation										
4												

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 46
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Intermixed grey-brown clay, subangular gravel, cobbles and boulders to 300mm (ripped claystone, siltstone and some coal), damp		D,PID	0.2		<1 ppm					
				D,PID	0.8		<1 ppm					
1								1				
	1.5	FILLING - Dark grey-black coal reject, generally comprising 45% clay, 35% carbonaceous siltstone, 20% coal, damp		D,PID	1.6		6.1 ppm					
		from 1.9m, plastic and metals inclusions										
2	2.0	FILLING - Brown gravelly sandy silt (including some coal), damp		D,PID	2.2		<1 ppm	2				
3								3				
	3.5	Pit discontinued at 3.5m, limit of investigation										
4								4				

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 47
PROJECT No: 39663C
DATE: 25 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Dark grey-black sand and fine to coarse gravel sized coal reject generally comprising 60% coal, 20% carbonaceous siltstone, 10% ash, 10% clay		D,PID	0.0		4.9 ppm					
	0.25			D,PID	0.25							
	0.35	FILLING - Orange-brown sandy fine to medium grained subangular gravel (ripped sandstone)		D,PID	0.3		5.6 ppm					
				D,PID	0.4		6.6 ppm					
	0.65	FILLING - Dark grey-black sand, gravel and cobble sized coal / coal reject generally comprising 90% coal, 5% carbonaceous siltstone, 5% clay, hydrocarbon odour / PAH odour, humid		D,PID	0.7		4.5 ppm					
	0.8	FILLING - Grey-brown gravelly fine to medium grained sand, moist										
1		COAL - Black silt, fine to medium grained gravel sized coal, becoming coarser with depth		D	1.0							
		from 1.5m to 1.55m, light grey clay band										
2												
	2.2	CLAYSTONE - Very low strength, highly weathered, light grey claystone, fractured		D,PID	2.3		4.2 ppm					
3	3.0	Pit discontinued at 3.0m, limit of investigation										
4												

RIG: JCB 3CX Backhoe with 600mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 48
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

[illegible]

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Slag skulls to 100mm diameter at surface adjacent to pit

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND		
A	Auger sample	pp Pocket penetrometer (kPa)
D	Disturbed sample	PID Photo ionisation detector
B	Bulk sample	S Standard penetration test
U	Tube sample (x mm dia.)	PL Point load strength (Is/50) MPa
W	Water sample	V Shear Vane (kPa)
C	Core drilling	▷ Water seep
		Water level

CHECKED
Initials:
Date:



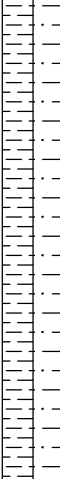
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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 49
PROJECT No: 39663C
DATE: 24 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.35	GRAVELLY CLAY - Hard, grey gravelly clay with some cobbles to 150mm, M<<Wp		D,PID,pp	0.1		<1 ppm, >400 kPa					
	0.6	CLAY - Hard, grey mottled orange-red clay with some fine to coarse grained gravel and cobbles to 100mm, M<Wp		D,PID,pp	0.5		<1 ppm, >400 kPa					
	1	CLAYSTONE/ SILTSTONE - Very low strength, extremely weathered, grey mottled orange fragmented claystone / siltstone with some ironstaining										
	2.2	Pit discontinued at 2.2m, refusal										
	3											
	4											

RIG: CAT 428 Backhoe, 450mm bucket with teeth

LOGGED: Collins

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 50
PROJECT No: 39663C
DATE: 01 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.15	FILLING - Generally comprising brown clayey silt, trace sub-rounded gravel up to 5mm, some rootlets, humid		D, PID	0.0		<1ppm					
	0.35	FILLING - Generally comprising clayey silt with some fine grained sandy gravel sized coal chitter (1-2%) and slag (1%), humid		D, PID	0.15		<1ppm					
	0.5	CLAYEY SILT - (Stiff) brown clayey silt with some fine grained sand, trace rootlets, humid			0.2							
		GRAVELLY SILTY CLAY - Hard red mottled grey gravelly silty clay, sub-angular gravel			0.3							
	1.2	SILTY CLAY - Hard grey silty clay with sub-angular gravel from 1.2m, grading to extremely low strength, extremely weathered conglomerate		D, PID, pp	0.8		<1ppm 400kPa					
					1.0							
					1.6		<1ppm 310kPa					
					1.8							
	1.9	Pit discontinued at 1.9m, refusal on conglomerate										
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 51
PROJECT No: 39663C
DATE: 01 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising brown clayey silt, trace sub-rounded gravel with trace (1-2%) gravel sized coal chitter, humid		D, PID	0.0		<1ppm					
					0.15							
	0.7	from 0.6m, becoming moist										
		FILLING - Generally comprising brown clayey sandy gravel, gravel generally comprising gravel sized coal chitter (50%)		D, PID	0.8		<1ppm					
1					1.0			1				
	1.9	CLAYEY SAND - Firm, grey mottled red rounded fine grained clayey sand with some trace sub-rounded gravel										
2				D, PID, pp	2.0		<1ppm 70kPa	2				
					2.2							
				D, PID	2.8		<1ppm					
3					3.0			3				
	3.6	Pit discontinued at 3.6m, refusal on conglomerate										
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: Water seepage at 2.1m

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 52
PROJECT No: 39663C
DATE: 01 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.3	FILLING - Generally comprising brown clayey sandy silt, some sub-angular gravel including trace coal chitter (1-2%) up to 4mm, trace porcelain and scrap metal, with rootlets to 0.15m, humid		D, PID	0.0		<1ppm					
					0.15							
	0.7	FILLING - Generally comprising grey mottled red brown silty clay, trace sand and gravel sized coal chitter (1-2%), humid		D, PID	0.3		Aggressivity <1ppm					
					0.5							
	1.7	SILTY CLAY - Very stiff, grey mottled orange brown silty clay with some sub-angular gravel, M<P										
				D, PID, pp	1.3		<1ppm 320kPa					
					1.5							
	2.1	CLAYEY SAND - (Medium dense) grey mottled orange brown clayey fine grained sand										
		from 2.1m, becoming moist										
	3.0	Pit discontinued at 3.0m, limit of investigation										

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 53
PROJECT No: 39663C
DATE: 01 Nov 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpiel

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

REMARKS: Sandstone/siltstone boulders up to 0.5m mid in eastern end of tip 1.2m to 1.5m

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (Is/50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
			Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 54
PROJECT No: 39663C
DATE: 01 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising brown clayey silt with some sub-angular gravel (siltstone mudstone 3-5% and coal chitter 1%)		D, PID	0.0		<1ppm					
					0.15							
	0.6	FILLING - Generally comprising brown silty clay with some sub-angular gravel (siltstone/conglomerate (40%)) and trace coal chitter (5%) ranging up to 80mm in parts		D, PID	0.8							
					1.0							
	1	from 1.2m, with some fine grained sand										
	2.0	CLAYEY GRAVELLY SAND - Orange brown mottled grey clayey gravelly sand predominantly conglomerate gravel (siltstone/conglomerate) with some green mottling in parts										
				D, PID, pp	2.5		126kPa					
					2.7							
				D, PID, pp	3.0		130kPa					
					3.2							
	3.4	Pit discontinued at 3.4m, due to maximum reach of backhoe										
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpieł

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



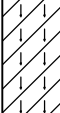
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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 55
PROJECT No: 39663C
DATE: 01 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising brown sandy gravel, predominately angular sand and gravel sized coal/coal chitter ranging up to 20mm (50%), silt (20%), clay (30%), humid		D, PID	0.0 0.02		<1ppm					
	0.4	FILLING - Generally comprising brown silty clayey sand with some angular gravel (siltstone/mudstone) and minor coal/coal chitter (5-10%) up to 40mm, trace rootlets, humid										
				D, PID	0.8 1.0		<1ppm					
	1											
		SILTY CLAY - Stiff grey brown mottled red brown silty clay, trace rootlets to 2.7m		D, PID, pp	1.5 1.7		<1ppm 150kPa					
	1.4											
												
	2											
		from 2.4m, colour change to grey mottled red										
	2.7											
		Pit discontinued at 2.7m, due to slow progress										
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 56
PROJECT No: 39663C
DATE: 01 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising brown clayey silt with some fine grained silt, angular rock fragments (siltstone and mudstone) some siltstone and brock fragments ranging up to 60mm		D,PID	0.0		<1ppm					
					0.15							
	0.5	CLAYEY SAND - (Dense) grey clayey sand with some angular rock fragments (siltstone conglomerate)										
					0.8		<1ppm 320kPa					
				D,PID, pp	1.0							
	1	from 1.1m, grading to weathered, low strength conglomerate										
	1.3	CONGLOMERATE - Low strength, weathered grey conglomerate			1.3		<1ppm					
	1.5	Pit discontinued at 1.5m, refusal on conglomerate		D, PID	1.5							
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 58
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.4	FILLING - Generally comprising brown silty clay, slightly gravelly with abundant rootlets to 0.1m		D, PID	0.1		<1ppm					
					0.3							
		FILLING - Generally comprising brown and grey gravelly silty clay, slightly sandy, predominately angular siltstone/sandstone ranging up to 200mm, humid to moist										
				D, PID	0.8		21ppm					
	1				1.0							
	2											
	2.3	FILLING - Generally comprising black clayey gravel, predominately coal/coal chitter (80%), moist to wet										
				D, PID	2.5		4ppm					
					2.7							
	3											
	3.1	Pit discontinued at 3.1m, refusal on sandstone										
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpel

WATER OBSERVATIONS: Free groundwater observed at 2.3m

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 59
PROJECT No: 39663C
DATE: 01 Nov 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpziel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (Is/50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬇	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 60
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising dark brown silty sand with some gravel and comprising siltstone (15%) coal chitter (20%) up to 40mm		D, PID	0.0		<1ppm					
					0.15							
					0.3		<1ppm					
				D, PID	0.5							
1												
	1.3	FILLING - Generally comprising black gravelly sand, predominantly medium grained coal/coal chitter (90%) with some silt (10%), humid		D, PID	1.3		<1ppm					
					1.5							
	1.9	FILLING - Generally comprising brown mottled red brown silty clay trace (3%) coal chitter gravel up to 30mm, humid			2.0		<1ppm					
2				D, PID	2.2							
	2.3	FILLING - Generally comprising red brown mottled red silty clay with some ironstone gravel										
	2.4											
		SANDY CLAY/CLAYEY SAND - Grey sandy clay/clayey sand, trace gravel and organics										
					2.8		<1ppm 50kPa					
3				D, PID, pp	3.0							
					3.5		<1ppm					
	3.7	Pit discontinued at 3.7m, practical reach of backhoe		D, PID	3.7							
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: Water seepage at 3.3m

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 61
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising brown gravelly sandy clay, gravel predominately angular sandstone and siltstone, humid			0.3		<1ppm					
	0.6			D, PID	0.5							
		FILLING - Generally comprising brown clayey sand with some angular sandstone (10%) coal chitter gravel (10%), humid			0.8		<1ppm					
	1			D, PID	1.0							
	1.3	FILLING - Generally comprising brown fine grained sand, humid										
	1.4	Pit discontinued at 1.4m, due to possible services										
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 61A
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.15	FILLING - Generally comprising brown clayey sand with some angular gravel, some rootlets, humid										
		FILLING - Generally comprising yellow/orange clayey sand with some angular cobble sized sandstone/crushed sandstone up to 150mm, humid										
1					0.8		<1ppm					
				D, PID	1.0			1				
					1.9		<1ppm					
2				D, PID	2.1			2				
	2.1	Pit discontinued at 2.1m, refusal in fill										
3												
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 62
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising light brown gravelly clayey grained sand gravel sized angular sandstone (15%) coal chitter(<2%) with abundant rootlets to 2m, humid			0.3		<1ppm					
	0.5	SILTY CLAY - Very stiff, grey mottled red silty clay, trace rootlets, humid, M<P		D, PID	0.5							
					0.8		<1ppm 310kPa					
	1			D, PID, pp	1.0			1				
	1.3	CLAYEY SILT - Very stiff dark brown clayey silt										
	1.4	SANDY CLAY/CLAYEY SAND - Very stiff/medium dense brown mottled red brown sandy clay		D, PID, pp	1.5		<1ppm 360kPa					
					1.7							
	2							2				
	2.4	Pit discontinued at 2.4m, refusal on sandstone										
	3							3				
	4							4				

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 63
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.7	FILLING - Generally comprising brown gravelly sandy clay, gravel sized sandstone (10%) coal chitter (5%), humid		D, PID	0.3		<1ppm Aggresivity					
					0.5							
	1.2	FILLING - Generally comprising yellow brown gravelly clayey sand with some sandstone cobbles, humid		D, PID	0.8		<1ppm					
					1.0							
	2.1	FILLING - Generally comprising brown gravelly sandy silt with some clay, gravel predominately sub-angular sandstone (70%) trace coal chitter (2-5%), humid		D, PID	1.3		<1pm					
					1.5							
	3.1	CLAYEY SAND/SANDY CLAY - (Hard/medium dense) brown mottled red clayey sand/sandy clay, M<P		D, PID, pp	2.5		<1ppm 450kPa					
					2.7							
	3.1	Pit discontinued at 3.1m, refusal on sandstone										
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 64
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILLING - Generally comprising light grey clayey silt, trace angular gravel, some rootlets, dry		D, PID	0.0		<1ppm					
					0.15							
		FILLING - Generally comprising light brown silty clay with some angular gravel, trace rootlets, dry		D, PID	0.3		<1ppm					
					0.5							
1	1.3				1.3		<1ppm					
	1.4	FILLING - Generally comprising dark brown clayey silt, trace inclusion of grey silty clay and angular gravel (siltstone)		D, PID	1.5							
		FILLING - Generally comprising grey mottled red brown silty clay, trace rootlets, dry to humid										
2	1.9				2.0		<1ppm 370kPa, residual topsoil					
		CLAYEY SILT - Brown (firm) clayey silt, trace angular gravel (siltstone), trace rootlets (possibly filling)		D, PID	2.2							
	2.4	SANDY CLAY/CLAYEY SAND - Very stiff grey mottled orange brown sandy clay, trace rootlets, M<P										
	2.7	Pit discontinued at 2.7m, refusal on sandstone										
3												
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 65
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
				Type	Depth	Sample	Results & Comments		5	10	15	20																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																							
	0.25	FILLING - Generally comprising dark brown/black silty sand, predominately coal chitter (40%), ash (30%) gravel ranging up to 20mm (silt 10%, sand 20%), trace rootlets		D, PID	0.0		<1ppm																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpiel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	SL	Standard penetration test
U _t	Tube sample (x mm dia.)	P	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬆	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 66
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpiel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	SL	Standard penetration test
U _t	Tube sample (x mm dia.)	P	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬆	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 67
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising brown clayey silt with some travel sandstone cobbles, trace rootlets, dry										
		from 0.3m, abundant fibre cement pieces up to 20mm and some corrugated metal sheeting between 0.3-0.5m			0.3		<1ppm					
				D, PID	0.5		<1ppm					
				D, PID	0.6							
	0.7	Pit discontinued at 0.7m, refusal on sandstone										
	1											
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 68
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.1	TOPSOIL - Generally comprising dark silty sand with some clay, abundant rootlets, humid										
		SILTY CLAY - Very stiff brown silty clay, trace rootlets, M<P		D, PID, pp	0.3		<1ppm 290kPa					
					0.5							
	0.6	CLAY - Hard grey mottled orange brown clay, trace rootlets, M<P										
	1			D, PID, pp	1.1		<1ppm 600kPa		1			
	1.35	Pit discontinued at 1.35m, refusal in hard clay (weathered mudstone)			1.3							
	2								2			
	3								3			
	4								4			

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 69
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILLING - Stiff grey mottled red silty clay, trace gravel (siltstone 1-2%), with abundant rootlets, humid		D, PID, pp	0.0		<1ppm 250kPa					
		FILLING - Generally comprising dark brown clayey silt, trace gravel (1%), trace rootlets, humid		D, A, PID, pp	0.2		<1ppm 80kPa					
					0.3							
					0.5							
	0.7	CLAYEY SILT - Soft brown clayey silt			0.8		Moist					
1		from 1.1m, trace sand		A	1.0				1			
					1.3		13 kPa, saturated					
				A, pp	1.5							
		from 1.7m, dark brown with some sand and trace rootlets			1.8		40kPa					
				A, pp	1.9							
2	2.0	CLAYEY SAND/SANDY CLAY - Soft grey clayey sand/sandy clay							2			
		from 2.4m, with gravel and cobble inclusions			2.3		40kPa					
				A, pp	2.5							
3	2.9	Pit discontinued at 2.9m, refusal on sandstone							3			
4									4			

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 70
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Light grey clay filling, trace silt with some rootlets to 0.2m, dry			0.0		<1ppm 270kPa					
					0.15		<1ppm 220kPa					
1	1.1	FILLING - Generally comprising red brown clayey sandy gravel, predominately angular sandstone, trace sandstone cobbles, humid			1.2		<1ppm					
	1.4				1.3							
	1.6	FILLING - Generally comprising clayey sandy gravel, gravel predominately sandstone with up to 20% sand and gravel sized coal/coal chitter, humid		D, PID, pp								
				D, PID, pp								
	1.6	SANDSTONE - Low strength, weathered, light grey fine grained sandstone		D, PID, pp	1.7		<1ppm					
				D, PID, pp	1.8							
2	1.9	Pit discontinued at 1.9m, refusal on sandstone										
3	3.0											
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpieł

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS:

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 71
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILLING - Generally comprising dark brown gravelly clayey sand, fine grained sand with sub-angular sandstone gravel up to 10mm, trace rootlets, humid		D, PID	0.0		<1ppm					
					0.15							
		FILLING - Generally comprising black gravelly sand (coal), predominately up to 10mm, trace sandstone fragments up to 30mm, dry to humid		D, PID	0.3		<1ppm					
					0.5							
	0.65				0.7		<1ppm					
	0.8	SANDSTONE - Light grey, low to medium strength, extremely weathered fine grained sandstone		D, PID	0.8							
		Pit discontinued at 0.8m, refusal on sandstone										
1												
2												
3												
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 72
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.0	FILLING - Generally comprising dark brown sandy silt trace clay and angular gravel (coal chitter), abundant rootlets, dry to humid		D,PID	0.0		<1 ppm					
	0.1				0.1							
	0.2				0.2							
	0.3	FILLING - Generally comprising light grey sandy clay, trace rootlets, humid		D,PID	0.3		<1 ppm					
	0.4				0.4							
	0.5	FILLING - Generally comprising brown clayey silty sand with some subangular sandy gravel, coal chitter (5%), trace brick fragments and scrap metal / pipes (40mm diameter) and possible rail lines at 1.5m		D,PID	0.5		<1 ppm					
	0.6				0.6							
	1.0				1.0							
	1.3			D,PID	1.3		21 ppm					
	1.5				1.5							
	1.7				1.7							
	1.8	FILLING - Generally comprising grey clayey medium grained sand with some gravel sized angular coal chitter (5%) and trace angular red-brown mudstone / siltstone, trace scrap metal pipes		D,PID	1.8		2 ppm					
	2.0				2.0							
	2.4				2.4							
	2.7	FILLING - Generally comprising grey silty clay, trace angular gravel (possible natural), moist		D,PID	2.7		<1 ppm					
	2.9	Pit discontinued at 2.9m, due to scrap metal in overlying fill (1.3m to 1.5m) preventing further excavation			2.9							
	3.0											
	4.0											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 73
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpiel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	SL	Standard penetration test
U _t	Tube sample (x mm dia.)	P	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬆	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 74
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpiel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	SL	Standard penetration test
U _t	Tube sample (x mm dia.)	P	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬆	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 75
PROJECT No: 39663C
DATE: 02 Nov 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpziel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (Is/50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬇	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 76
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpziel

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Test pit collapse on side walls - unstable

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND		
A	Auger sample	pp Pocket penetrometer (kPa)
D	Disturbed sample	PID Photo ionisation detector
B	Bulk sample	S Standard penetration test
U	Tube sample (x mm dia.)	PL Point load strength (Is/50) MPa
W	Water sample	V Shear Vane (kPa)
C	Core drilling	▷ Water seep
		Water level

CHECKED
Initials:
Date:



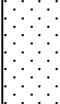
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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 77
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.21	FILLING - Generally comprising dark brown silty sand with some clay and trace gravel sized coal chitter and coked siltstone ranging up to 40mm		D,PID	0.0		<1 ppm					
					0.15							
		FILLING - Generally comprising light red-brown silty sand (coked waste) with some gravel and cobble sized coked siltstone (10-12%)		D,PID	0.3		<1 ppm					
					0.5							
	1	from 1.2m, trace coal / coal chitter (2%)		D,PID	1.3		<1 ppm					
	1.45				1.4							
		SANDSTONE - Extremely weathered to weathered, low strength, light grey fine grained sandstone										
	1.8	Pit discontinued at 1.8m, refusal on sandstone										
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

REMARKS: Sample of fibre cement collected from sfc near test pit

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 77A
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.05	FILLING - Generally comprising brown silty clayey sand, trace subangular gravel (sandstone), abundant rootlets										
	0.3	FILLING - Generally comprising light red-brown silty sandy gravel (coked waste), gravel with trace cobbles predominantly red coked sandstone, trace coal / coal chitter (2%) and trace slag (1-2%), humid Pit discontinued at 0.3m, refusal on fill										
	1											
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
			Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 77B
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.15	FILLING - Generally comprising silty clayey sand with trace subangular gravel sized coal / coal chitter (1-2%), abundant rootlets, humid		D,PID	0.0		<1 ppm					
	0.35	FILLING - Generally comprising light red-brown silty sand (coked waste), with some gravel and cobble sized sandstone (10-15%), trace coal / coal chitter (1-2%) up to 40mm, trace slag, humid		D,PID	0.15		<1 ppm					
	0.6	SANDSTONE - Extremely weathered, medium strength, light grey fine grained sandstone Pit discontinued at 0.6m, refusal on sandstone		D,PID	0.2		<1 ppm					
					0.3							
					0.4							
					0.6							
	1											
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 78
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.2	FILLING - Generally comprising dark brown-black fine grained sandy gravel (coked waste), gravel predominantly coal chitter (50%) and coked sandstone (20%), with trace inclusion of grey coke ash, dry to humid		D,PID	0.0		<1 ppm					
	0.25				0.15							
		SANDSTONE - Low to medium strength, weathered slightly grey with red ironstaining in parts, fine grained sandstone Pit discontinued at 0.25m, refusal on sandstone										
	1											
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpziel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 79
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising dark brown sandy gravel with predominantly coal / coal chitter 40% and coked sandstone (30%, trace rootlets, humid		D,PID	0.0		<1 ppm					
					0.15							
	0.3	SILTY CLAY - Hard, grey mottled orange silty clay with some fine grained sand and trace rootlets, M<Wp		D,PID,A,pp	0.3		<1 ppm, 600 kPa					
					0.5							
				D,PID,A,pp	0.8		<1 ppm, 600 kPa					
					1.0							
	1	from 1.2m, grading to silty sandy clay		D,PID	1.3		<1 ppm					
					1.5							
	1.6	at 1.5m, grading to extremely low strength, weathered fine grained sandstone Pit discontinued at 1.6m, refusal on sandstone										
	2											
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 80
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising light brown clayey sandy gravel; gravel predominantly coked sandstone (50-60%), trace rootlets, humid		D,PID	0.0		<1 ppm					
					0.15							
	0.45	FILLING - Generally comprising dark brown clayey sandy silt with some subangular gravel, trace rootlets, (possibly residual topsoil)		D,PID,pp	0.4		<1 ppm, 120 kPa					
					0.5							
	0.7	CLAYEY SANDY SILT - Stiff, light grey fine grained clayey sandy silt			0.8		<1 ppm, 140 kPa					
				D,PID,pp	1.0							
1					1.8		<1 ppm, 300 kPa					
				D,PID,pp	2.0							
2					2.6		<1 ppm					
	2.5	SILTY CLAY - Very stiff, grey mottled orange silty clay, slightly sandy, trace subangular gravel, M>Wp		D,PID	2.7							
	2.75	Pit discontinued at 2.75m, slow progress in silty clay										
3												
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

REMARKS: Fine sample collected from surface near test pit 80

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 81
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpziel

WATER OBSERVATIONS: Seepage from 1.9m

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬇	Water level

CHECKED
Initials:
Date:



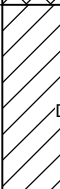
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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 82
PROJECT No: 39663C
DATE: 31 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.15	FILLING - Generally comprising dark brown clayey silt, trace subangular gravel, glass and scrap metal, abundant rootlets, humid		D,PID	0.0		<1 ppm					
					0.15							
		FILLING - Generally comprising light brown clayey silt, trace charcoal fragments (possibly natural), M<Wp		D,PID	0.3		<1 ppm					
					0.5							
	0.55	CLAY - Very stiff, grey brown mottled orange-brown clay, trace rootlets, M<Wp			0.5							
					0.8		<1 ppm, 310 kPa					
				D,PID,pp	1.0							
1								1				
	1.2	grading to extremely weathered medium strength claystone at 1.2m										
	1.35	CLAYSTONE? - Brown, weathered medium strength claystone? Pit discontinued at 1.35m, refusal on possible claystone										
2								2				
3								3				
4								4				

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 83
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.15	TOPSOIL - Generally comprising brown silt, trace clay and sand, abundant rootlets, dry		A,PID	0.0		<1 ppm					
		SILT - Very stiff, brown silt trace fine grained sand and rootlets, M<Wp			0.15							
					0.3		<1 ppm, 350 kPa					
				D,A,PID,pp	0.5							
					0.8		<1 ppm, 250 kPa					
	0.95	CLAYEY SILT - Very stiff, brown clayey silt, M<Wp		D,PID,pp	1.0							
		at 1.2m, becoming wet to saturated with trace sand			1.3		<1 ppm					
				D,PID	1.5							
	1.7	CLAYEY SAND - (Loose to medium), brown loose fine grained clayey sand, saturated			1.8		<1 ppm					
				D,A,PID	2.0							
					2.3		<1 ppm					
				A,PID	2.5							
					2.8		<1 ppm					
				D,A,PID	3.0							
	3.0	Pit discontinued at 3.0m, limit of investigation										

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: Water seepage at 1.7m

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 84
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

[illegible]

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpiel

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength (Is/50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		⬇	Water level

CHECKED
Initials:
Date:



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TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 85
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
	0.55	FILLING - Generally comprising brown sandy silt, slightly gravelly, gravel and trace cobbles predominantly comprising angular siltstone (10%) and coal / coal chitter (10%) with abundant rootlets to 0.15m, dry to moist		D	0.3							
					0.5							
	1	FILLING - Dark brown clayey silt, trace subangular gravel, M<Wp		D,A,pp	0.8		300 kPa					
					1.0			1				
	1.2	FILLING - Grey-brown mottled orange-brown silty clay, M<Wp		A,pp	1.3		150 kPa					
					1.5							
		from 1.7m, fine grained sandy clay fill		D,A,pp	1.8		130 kPa					
	2				2.0			2				
	2.1	FILLING - Light brown fine grained silty clayey sand, moist to wet		A	2.5							
					2.6							
		saturated at 2.85m		D,A	2.9			▼				
	3				3.0			3				
	3.2	Pit discontinued at 3.2m, limit of investigation										
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpel

WATER OBSERVATIONS: Free groundwater observed at 2.85m

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	▷	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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Geotechnics • Environment • Groundwater

TEST PIT LOG

CLIENT: Coal & Allied Pty Ltd
PROJECT: Preliminary Geo-Contamination Assessment
LOCATION: Minmi

SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 86
PROJECT No: 39663C
DATE: 30 Oct 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising dark brown silty sand with some cobble and gravel sized coal chitter (10%) rootlets at 0.2m, humid			0.3		<1 ppm					
	0.5	SANDY SILT - Stiff, light brown fine grained sandy silt, M<Wp		D,PID	0.5							
					0.8		<1 ppm, 150 kPa					
	1			D,PID,pp	0.9							
	1.2	SILTY CLAY - Hard, light brown mottled red silty clay, trace gravel (ironstone), M<Wp			1.3		<1 ppm, 400 kPa					
				D,PID,pp	1.5							
	2	from 2m, colour change to light brown, trace sand and trace gravel			2.2		<1 ppm, 400 kPa					
				D,PID,pp	2.4							
	2.7	at 2.7m, damp, M<Wp Pit discontinued at 2.7m, slow progress										
	3											
	4											

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpziel

WATER OBSERVATIONS: No free groundwater observed

☐ Sand Penetrometer AS1289.6.3.3

☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	>	Water seep
		≡	Water level

CHECKED
Initials:
Date:



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SURFACE LEVEL: --
EASTING:
NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 87
PROJECT No: 39663C
DATE: 07 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising brown fine grained sandy clay with some angular gravel predominantly coal chitter (5-10%) and siltstone (5%), humid from 0.2m, trace sandstone gravel (2%)		D,PID	0.0 0.05		<1 ppm					
1					0.8 1.0		<1 ppm	1				
	1.45	FILLING - (Dense) orange-brown fine grained clayey sand with some sand and gravel sized coal (5-10%), humid		D,PID	1.6 1.7		<1 ppm					
	1.8 1.9	SANDSTONE - Low strength, weathered grey fine grained sandstone Pit discontinued at 1.9m, refusal on sandstone						2				
2												
3												
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpieł

WATER OBSERVATIONS: No free groundwater observed

REMARKS:

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
D	Disturbed sample	PID	Photo ionisation detector
B	Bulk sample	S	Standard penetration test
U	Tube sample (x mm dia.)	PL	Point load strength Is(50) MPa
W	Water sample	V	Shear Vane (kPa)
C	Core drilling	Δ	Water seep
		≡	Water level

CHECKED
Initials:
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NORTHING:
DIP/AZIMUTH: 90°/--

PIT No: 88
PROJECT No: 39663C
DATE: 07 Nov 07
SHEET 1 OF 1

RL	Depth (m)	Description of Strata	Graphic Log	Sampling & In Situ Testing				Water	Dynamic Penetrometer Test (blows per mm)			
				Type	Depth	Sample	Results & Comments		5	10	15	20
		FILLING - Generally comprising brown fine grained clayey sand with trace gravel, comprising sands (2-3%), coal (1-2%), trace rootlets, damp		D,PID	0.0 0.05		<1 ppm					
	0.3	CLAYEY SAND/SANDY CLAY - (Medium dense to hard), yellow fine grained clayey sand / sandy clay, trace subangular gravel		D,PID,pp	0.4 0.5		<1 ppm, 420 kPa					
		at 0.6m, grading to low strength, weathered sandstone										
	0.8	SANDSTONE - Low strength weathered yellow fine grained sandstone										
	0.9	Pit discontinued at 0.9m, refusal on sandstone										
1												
2												
3												
4												

RIG: Backhoe, 450mm bucket with teeth

LOGGED: Karpriel

WATER OBSERVATIONS: No free groundwater observed

- ☐ Sand Penetrometer AS1289.6.3.3
☐ Cone Penetrometer AS1289.6.3.2

REMARKS:

SAMPLING & IN SITU TESTING LEGEND			
A	Auger sample	pp	Pocket penetrometer (kPa)
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