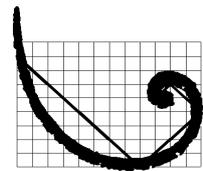


Annex D

Borelogs

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BA\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>28/11/2013</b>	Total Depth (m): <b>8.8</b>	Final Water Level (m bgl): <b>4.315</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>182.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>183.23</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307644.322</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412540.208</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Brown, dry, firm, medium plasticity, no staining or odours			0		DS	Y		0	BA_MW01_0.1	
<b>Clay</b> Grey and orange mottled, dry to moist, medium plasticity, no staining or odours. Clay as above with minor gravels			1					0		
<b>Shale</b> Weathered, grey with brown, dry, laminated, friable, dark grey laminations. Completely weathered between 2.5 - 2.65mbgl. Shale fragments (less weathered) from 2.65mbgl. Refusal with PT at 2.7mbgl			2		US	Y		4.5	BA_MW01_1.75	
			3					3.9		
<b>Clay</b> Dark grey brown, moist, plastic, no odour, no			5							

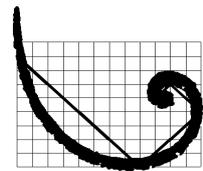
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BA\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>28/11/2013</b>	Total Depth (m): <b>8.8</b>	Final Water Level (m bgl): <b>4.315</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>182.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>183.23</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307644.322</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412540.208</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
End of Log			9							
			10							

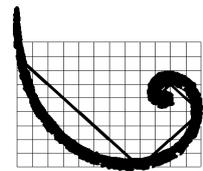
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BA\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>3/12/2013</b>	Hole Diam. / Width (mm): <b>200</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): <b>0</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307356</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6412598</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Brown, soft, moist, high plasticity, homogeneous, no odour, no staining, red-brown			0					0		
<b>Clay</b> Light brown with grey mottles			0.2	■	DS	N		0.2	BA_MW02_0.5	
<b>Sandy Clay</b> With gravel, light brown with grey mottle, moist, medium stiff, medium plasticity, homogeneous, no odour, no staining			1					0		
<b>Clayey Sand</b> With gravel, light brown, moist, medium dense, fine sand with coarse sand to fine gravel, well sorted, rounded, no evidence of impact			1					0.2		
<b>Silty Clay</b> Grey with minor brown mottling, moist, non-plastic, no odour, no staining, red ironstone/siltstone inclusions from 1.75mbgl and completely weathered, increasing hardness with depth. Some crystalline quartz or similar precipitation observed at 3.8mbgl			2	■	US	Y		2.9	BA_MW02_2.1	
			3					1.4		
			4					1		
			5							

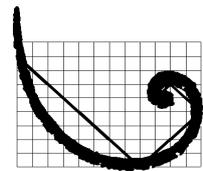
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BA\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>3/12/2013</b>	Hole Diam. / Width (mm): <b>200</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): <b>0</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307356</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6412598</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
<b>Siltstone</b> Grey, dry, hard becoming harder with depth			7							
			8							
			9							
			10							

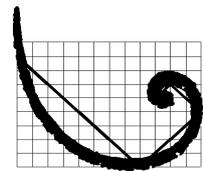
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BA\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>5</b>	Final Water Level (m bgl): <b>0.39</b>
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>174.29</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>175.12</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307568.713</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412789.352</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Silt</b> Brown, dry, low plasticity, no staining, no odour			0		DS	N		0	BA_MW03_0.1	
<b>Shale</b> Weathered, layered with silty clay, brown, moist			1					0		
<b>Shale</b> Brown and grey, dry, laminated, completely weathered in sections			2		US	Y		0.4	BA_MW03_1.75	
<b>Shale</b> Completely weathered from 3.0mbgl. Wet from 3.5m bgl, causing well to collapse to 5.0m bgl.			3					0.5		
			4					0.4		
			5							

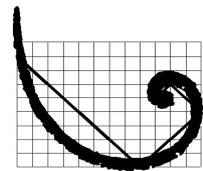
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Log By: **AM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BB\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **27/11/2013** Total Depth (m): **4.7** Final Water Level (m bgl): **1.515**  
 Drill Finish Date: **27/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): **170.74**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **171.46**  
 Driller: **Wade Manger** Casing Diam. (mm): **50** Easting (MGA): **305818.486**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Monument** Northing (MGA): **6412858.197**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **4.7**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy clay with some gravel, orange brown, moist, soft, non-plastic, no odour or staining			0		DS	N		0	BB_MW01_0.1	
<b>Sandy Clay</b> Dark grey to black, moist, soft, low plasticity, no odour or staining, high organic content			0.1					0.1		
<b>Silty Clay</b> Olive brown, moist, medium stiff, medium plasticity, no odour or staining, grey mottled orange brown from 1.5mbgl			1					0		
			2					0		
			2		US	N		0.1	BB_MW01_2.3	
<b>Silty Clay</b> Trace sand, orange brown mottled grey, wet, very soft, high plasticity, no odour, no staining			3					0.1		
<b>Sandy Clay</b> Orange brown, wet, soft, non-plastic, no odour, no staining, coarse sand			4					0		
<b>Gravelly Sandy Clay</b> Grey mottled orange, moist, stiff, non-plastic, no odour, no staining, highly weathered sandstone			4					0		
End of Log			5							

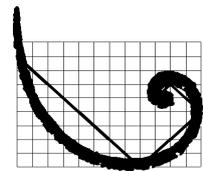
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BB\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>27/11/2013</b>	Total Depth (m): <b>9.2</b>	Final Water Level (m bgl): <b>3.63</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>172.85</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>173.57</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>305776.788</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412842.754</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Clay</b> Orange brown, moist, soft, non-plastic, no odour, no staining, rootlets to 0.3mbgl, weathered shale and sandstone boulders from 1.2mbgl			0		DS	N		0	BB_MW02_0.1	
			0					0		
			1					0		
			2					0		
			3					0		
<b>Sandstone</b> Orange and grey, well sorted, fine grained, soft, massive, highly weathered, silica rich			4					0.1		
			5							

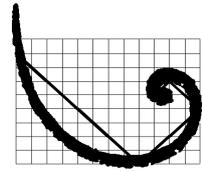
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BB\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>27/11/2013</b>	Total Depth (m): <b>9.2</b>	Final Water Level (m bgl): <b>3.63</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>172.85</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>173.57</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>305776.788</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412842.754</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7					0		
			8					0.1		
<b>Sandy Clay</b> Dark grey, wet, soft, low plasticity, no odour, no staining			9		DS	N		0	BB_MW02_9.0	
End of Log			10							

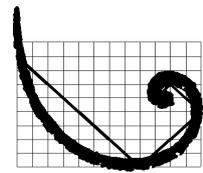
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BB\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **28/11/2013** Total Depth (m): **6** Final Water Level (m bgl): **4.42**  
 Drill Finish Date: **28/11/2013** Hole Diam. / Width (mm): **125** Elevation (Ground): **192.43**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **193.14**  
 Driller: **Wade Manger** Casing Diam. (mm): **50** Easting (MGA): **306070.012**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Monument** Northing (MGA): **6412314.502**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **4**

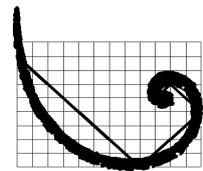
Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Red brown, moist, very soft, high plasticity, no odour, no staining			0		DS	Y		0.1		
			0					0	BB_MW03_0.5	
<b>Gravelly Clay</b> Red brown, moist, soft, non-plastic, no odour, no staining, weathered sandstone pieces throughout			1		DS	Y		0	BB_MW03_0.9	
			1					0		
<b>Sandstone</b> Grey with orange brown weathering, very fine to fine grained, well sorted, soft, highly weathered, massive, salt crystals at 3.5mbgl			2					0		
			3					0		
			4		US	N		0	BB_MW03_3.6	
<b>Siltstone</b> Grey, fine grained, dry, soft, well sorted, no odour, no staining			4							
<b>Silty Clay</b> Grey, wet, very soft, medium plasticity, no odour, no staining, completely weathered siltstone			5							

**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**  
 Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BB\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>28/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>4.42</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>192.43</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>193.14</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306070.012</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412314.502</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6		US	Y			BB_MW03_5.9	
End of Log			7							
			8							
			9							
			10							

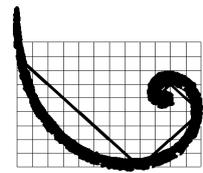
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BB\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>28/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>6.065</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>196.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>197.11</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306380.832</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412496.139</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Brown, moist, soft, non-plastic, no odour, no staining			0					0		
					DS	N		0	BB_MW04_0.5	
<b>Clayey Gravel</b> Grey, moist, dense, coarse grained, poorly sorted, angular, siltstone fragments (cobble sized) throughout			1					0		
<b>Siltstone</b> Grey brown, dry, fine grained, highly weathered, soft, no odour, no staining. Grey from 5.5m bgl			2					0		
			3					0		
			4					0		
			5							

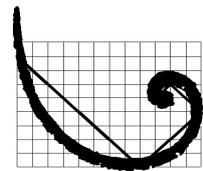
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BB\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>28/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>6.065</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>196.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>197.11</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306380.832</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412496.139</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
<b>Sandy Clay</b> Orange brown, mottled grey, moist to wet, soft. Becoming hard and dry from 9.0m bgl			8							
			9							
					DS	N		0	BB_MW04_9.5	
			10							

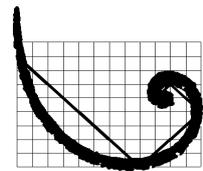
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BB\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>27/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): <b>0.93</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>164.43</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>165.07</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>305643.819</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413017.915</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Sandy Clay</b> Orange brown, mottled grey, moist, soft, low plasticity, no odour, no staining, wet from 1.0mbgl			0								
					DS	Y		0	BB_MW05_0.2		
									0		
					DS			0	BB_MW05_0.9		
			2				0.1				
			3		US	Y		0	BB_MW05_3.0		
End of Log			4								
			5								

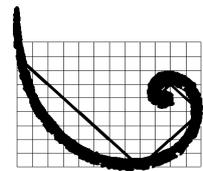
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BC\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>1.6</b>	Final Water Level (m bgl):
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type:	Elevation (Case): <b>0</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm):	Easting (MGA): <b>307342</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413215</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b>										
<b>Clay</b> Orange-brown					DS	N		0	BC_MW01_0.3	
<b>Sandstone</b> Orange-brown, large ironstone cobbles and boulders, very firm										
			1		DS	Y		0	BC_MW01_1.0	
					DS	Y		0	BC_MW01_1.5	
End of Log			2							
			3							
			4							
			5							

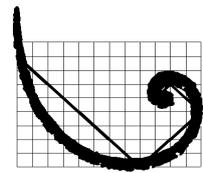
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BC\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>13/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307312</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413155</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b>			0							
<b>Clay</b> Orange-brown, slightly moist, medium plasticity, no stain, no odour			0		DS	N		0	BC_MW02_0.3	
			0					0		
			1					0		
			0					0		
<b>Sandstone</b> Weathered, clay inclusions, orange-brown, slightly moist, very dense, no odour, no staining			2					0		
			2					0		
			2		US	Y		0	BC_MW02_2.5	
			3							
<b>Shale</b> Weathered, grey-brown, dry, no stain, no odour			3							
			4							
			5							

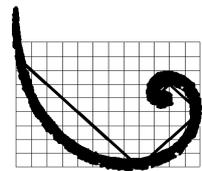
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BC\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>13/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307312</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413155</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
<b>Shale</b> Grey, dry, no stain, no odour			9							
			10							

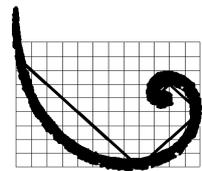
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BC\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>13/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307312</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413155</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
			13							
			14							
			15							

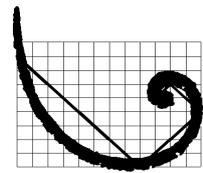
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BC\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>2</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307384</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413173</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Orange-brown, fine to coarse subgranular gravels, dry, medium plasticity, no stain, no odour			0	■	DS	Y		0	BC_MW03_0.1	
			0.1					0		
			0.2					0		
<b>Sandstone</b> Orange- brown, , dry, very dense, no odour			2	■	US	Y		0	BC_MW03_2.0	
End of Log			3							
			4							
			5							

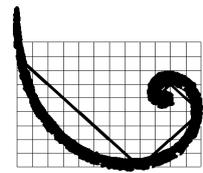
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BC\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>1.6</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307330</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413187</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b>										
<b>Fill</b> Clay, orange-brown, slight moist, med plasticity, no odour, no staining, minor rocks					DS	N		0	BC_MW04_0.3	
<b>Clay</b> Orange- brown					DS	Y		0	BC_MW04_1.6	
End of Log										

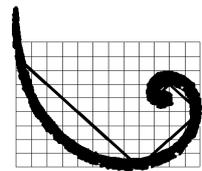
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BC\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>30</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307394.23</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413149.073</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Orange-brown, very dry at surface grading to slightly moist, medium plasticity, no stain, no odour			0	■	DS	Y		0	BC_MW05_0.1	
			1					0		
<b>Sandstone</b> Orange-brown, dry, very dense, no stain, no odour			2	■	US	Y		0	BC_MW05_1.8	
<b>Shale</b> Grey, dry, no odour			3							
			4							
			5							
			6							
			7							
			8							
			9							
			10							

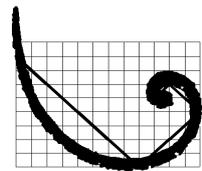
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BC\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>30</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307394.23</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413149.073</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

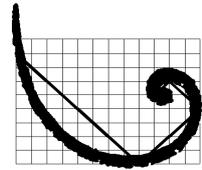
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BC\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>30</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307394.23</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413149.073</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			21							
			22							
			23							
			24							
			25							
			26							
			27							
			28							
			29							
			30							

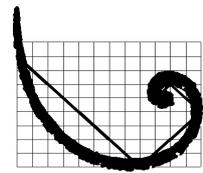
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BC\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>1.6</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307340</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413247</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Red-brown, dry, stiff, non plastic, no odour or staining			0	■	DS	N		0	BC_SB01_0.2	
								0		
			1					0		
<b>Sandstone</b> Dry, very dense, tree roots, no odour or staining				■	US	Y		0	BC_SB01_1.6	
End of Log			2							
			3							
			4							
			5							

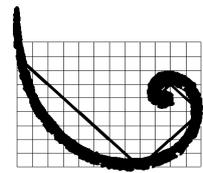
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BC\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>1.6</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307373</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413339</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Silty Clay</b> Red-brown, dry, hard, non plastic, no odour or staining			0		DS	Y		0.2	BC_SB02_02		
			0.2								
			1						0		
<b>Sandstone</b>					DS	Y		0.1	BC_SB02_1.5		
End of Log			2								
			3								
			4								
			5								

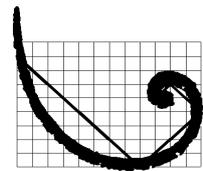
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BC\_SB03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>2</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307449.198</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413548</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Silt</b> Brown, dry, hard, low plastic, no staining, no odour			0	■	DS	N		0	BC_SB03_0.1	
<b>Shale</b> Extremely weathered								0		
<b>Shale</b> Weathered, hard								0		
<b>Shale</b> Extremely weathered			1					0		
<b>Shale</b> Weathered shale, shale, grey-orange, very dense, no odour, no sheen								0		
			2	■	US	Y		0	BC_SB03_2.0	
End of Log										
			3							
			4							
			5							

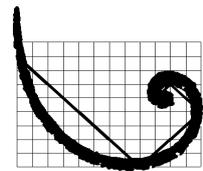
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BC\_SB04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>1.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307485</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413569</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Silt</b> Brown, low plasticity, hard, no odour, no staining			0		DS	N		0	BC_SB04_0.1	
<b>Shale</b> Weathered with layers of grey clay, orange/ grey layers, very dense, no odour, no staining			1					0		
			1.5		DS	Y		0	BC_SB04_1.5	
End of Log			2							
			3							
			4							
			5							

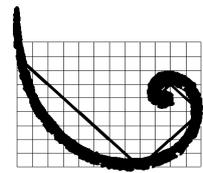
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>1.15</b>
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>164.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>166.05</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307590.742</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414362.081</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clayey Gravel, dark grey, dry, fine to coarse, well sorted, sub angular, dense, no stain, no odour			0		DS	N		0.1	BE_MW01_0.1	
<b>Siltstone</b> Grey, dry, fine grained, no stain, no odour.			1							
			2							
			3							
			4							
			5							

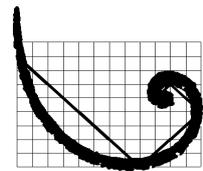
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>1.15</b>
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>164.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>166.05</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307590.742</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414362.081</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
End of Log			7							
			8							
			9							
			10							

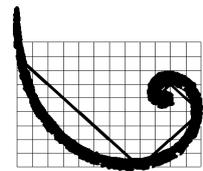
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>7.5</b>	Final Water Level (m bgl): <b>2.29</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>162.76</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>163.56</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307602.752</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414655.895</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clayey sand, grey, moist, loose, fine to medium grained, no odour or staining, rootlets throughout			0		DS				BE_MW02_0.1	
<b>Shale</b> Grey, dry, fine grained, fractured			1							
			2							
			3							
			4							
			5							

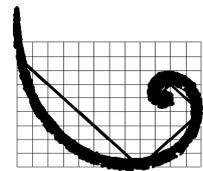
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BE\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>7.5</b>	Final Water Level (m bgl): <b>2.29</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>162.76</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>163.56</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307602.752</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414655.895</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6 7							
End of Log			8 9 10							

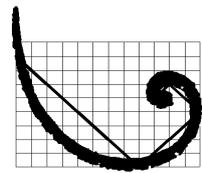
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>1.14</b>
Drill Finish Date: <b>29/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>161.63</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>162.51</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307604.023</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414937.795</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Shale</b> Extremely weathered, grey, brown, dense. Coal dust on surface			0		DS	N		0	BE_MW03_0.1	
								0		
			1					0		
<b>Shale</b> Weathered, orange-brown								0.3		
			2		US	N		0	BE_MW03_2.0	
<b>Siltstone</b> Dark grey, dry, very fine, soft, no odour or staining, highly weathered			3					0.1		
			4					0		
			5					0.1		

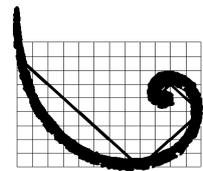
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>1.14</b>
Drill Finish Date: <b>29/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>161.63</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>162.51</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307604.023</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414937.795</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0		
End of Log			7							
			8							
			9							
			10							

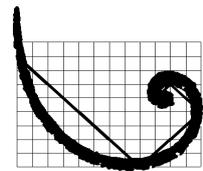
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>8.9</b>	Final Water Level (m bgl): <b>6.12</b>
Drill Finish Date: <b>15/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.27</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.87</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307374.716</b>
Drill Method: <b>NDD</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415132.977</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Fill</b> Silty sand, dark brown, dry, loose, fine grained, well sorted, no odour or staining.  <b>Gravelly Clay</b> Orange-brown, moist, stiff, non-plastic, no odour, or staining. Weathered shale fragments throughout			0.4								
			0.4								
			1	■	DS	Y		0.4	BE_MW04_1.0		
								0.5			
			2	■	US	Y			BE_MW04_2.0		
<b>Clay</b> Light brown-orange with grey mottling, dry, some plasticity, no odour or staining. (completely weathered shale)			3								
			4								
			5								

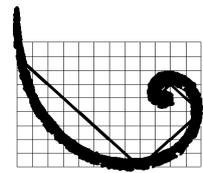
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>8.9</b>	Final Water Level (m bgl): <b>6.12</b>
Drill Finish Date: <b>15/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.27</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.87</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307374.716</b>
Drill Method: <b>NDD</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415132.977</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
End of Log			9							
			10							

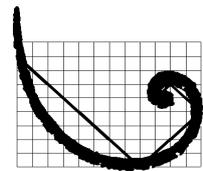
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BE\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>7.3</b>	Final Water Level (m bgl): <b>5.245</b>
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.25</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.94</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307334.539</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415094.436</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6</b>	

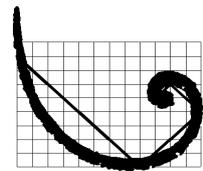
Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks		
Ground Surface			0									
<b>Fill</b> Silty sand, dark brown, moist, loose, fine, graded, well sorted, no odour or staining,  <b>Gravelly Clay</b> Orange-brown, dry, stiff, non-plastic, no odour or staining. Weathered shale fragments throughout			0		DS	N		0.3	BE_MW05_0.1			
			0.5						0.5			
			1				DS	Y		0.4	BE_MW05_1.5	
			2				US	Y			BE_MW05_2.0	
<b>Clay</b> Black, moist, soft, medium plasticity, organic odour			4									
<b>Clay</b> Brown with orange mottling, moist, plastic, no odour, no staining			5									

**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/HC**  
 Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>7.3</b>	Final Water Level (m bgl): <b>5.245</b>
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.25</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.94</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307334.539</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415094.436</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
End of Log			8							
			9							
			10							

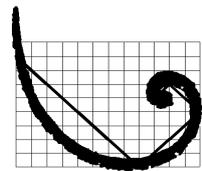
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BE\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>3.62</b>
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.29</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.9</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307255.406</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415016.552</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, dark brown, dry, loose, fine grained, well sorted, no odour or staining. Trace coal dust at surface  <b>Gravelly Clay</b> Orange-brown, moist, stiff, non-plastic, no odour or staining. Weathered shale fragments throughout			0		DS	N		0.8	BE_MW06_0.1	
			0.9					0.9		
			1.2					1.2		
			0.7					0.7		
			2					0.2		
			3					0.1		
			4					0.2		
<b>Clay</b> Grey, mottled dark grey, moist, stiff, low plasticity, organic odour  <b>Sandy Clay</b> Orange-brown, mottled grey, moist, soft, low plastic,			5					0.1		

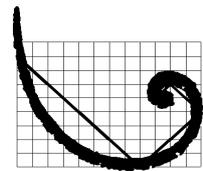
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>3.62</b>
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.29</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.9</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307255.406</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415016.552</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Silty Clay</b> Grey-brown, moist, soft, meduim plasticity, no odour or staining			6		US	N		0.1	BE_MW06_6.0	
End of Log			9							
			10							

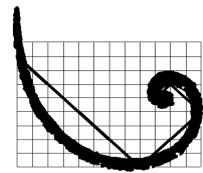
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>1.95</b>
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.9</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307181.968</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414944.337</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Topsoil, silty sand, dark brown			0					1.7		
<b>Fill</b> Gravelly clay, orange-brown, dry, stiff, non-plastic, no odour or staining. Weathered shale fragments throughout			0		DS	N		1.4	BE_MW07_0.5	
			1					1.7		
			1.6					1.6		
			2					0		
			3					0.1		
			4					0.1		
			5					0		

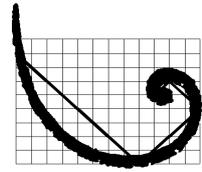
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: SM/TC/HC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BE\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>1.95</b>
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.9</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307181.968</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414944.337</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Clay</b> Black, moist, soft, medium plasticity, organic odour  <b>Clay</b> Brown, mottled orange, moist, soft, medium plastic, no staining, no odour			6		US	Y		0	BE_MW07_6.0	
			7							
			8							
			9							
End of Log			10							

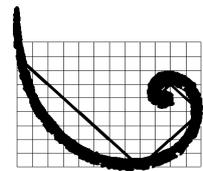
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BE\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **14/11/2013** Total Depth (m): **6.8** Final Water Level (m bgl): **2.21**  
 Drill Finish Date: **22/11/2013** Hole Diam. / Width (mm): **125** Elevation (Ground): **159.99**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **160.54**  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **50** Easting (MGA): **307089.539**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Monument** Northing (MGA): **6414840.899**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **5.5**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, dark brown, dry, medium dense, fine grained, well sorted, no odour or staining			0					0.1		
<b>Clayey Gravel</b> Orange-brown, dry, medium dense, medium to coarse, angular, poorly sorted, no odour or staining. Weathered shale fragments throughout			0.2		DS	N		0.2	BE_MW08_0.5	
			1					0		
								0.1		
<b>Sandy Clay</b> Grey, mottled orange and red, moist, soft, non-plastic, no staining or odour			2					0		
			3					0		
			4					0		
			5							

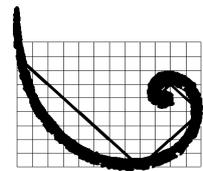
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BE\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>6.8</b>	Final Water Level (m bgl): <b>2.21</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>159.99</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>160.54</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307089.539</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414840.899</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6		US	N		0	BE_MW08_5.2	
End of Log			7							
			8							
			9							
			10							

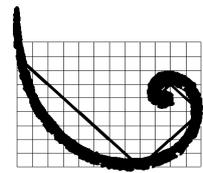
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BE\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>29/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306991</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414686</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clayey Gravel</b> Orange, dry, fine to coarse sub angular/sub rounded			0		DS	N		0	BE_MW09_0.1	
<b>Shale</b> Pale grey, very dense, slightly weathered with brown mottling @ 1 m bgl, some coarse crystalline grains.			1		US	N		3.2	BE_MW09_0.9	
<b>Siltstone</b> Dry, dark grey, weathered, no odour, no staining			3							
<b>Siltstone</b> Slightly moist, light brown to grey, highly weathered/fractured, no odour, no staining			4							
			5							

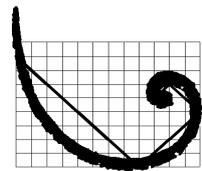
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BE\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>29/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306991</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414686</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Siltstone</b> Dry, predominately grey with some colouring, no odour, no staining.			6							
<b>Siltstone</b> Dry, grey, weathered, no odour, no staining			7							
			8							
			9							
			10							

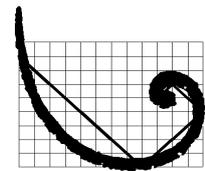
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>14</b>	Final Water Level (m bgl): <b>9.545</b>
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>137.26</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>137.98</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309174.324</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6419560.689</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>12.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Topsoil</b>			0							
<b>Fill</b> Gravelly sand, brown, dry, moderately well compacted, no odour, no staining			0.1		DS	N		0.1	BF_MW01_0.4-0.5	
<b>Clayey Sand</b> Dark brown, dry, rare gravel, medium to fine sand, some organic matter and rootlets			0.5							
<b>Clay</b> Orange brown, dry, slightly sandy, low plasticity			1							
<b>Sandstone</b> Pale brown, dry, hard			2		US	N		0.2	BF_MW01_1.8-1.9	
<b>Clay</b> Orange, dry, some fine sand, low plasticity, some siltstone gravel from 4.5 to 5.5mbgl, no odour, no staining			3							
			4							
			5							

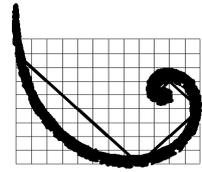
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>14</b>	Final Water Level (m bgl): <b>9.545</b>
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>137.26</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>137.98</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309174.324</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6419560.689</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>12.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Sandstone</b> Grey, dry, moderately weathered, becoming wet at 12.5mbgl, wet at 13.0mbgl			6 7 8 9 10							

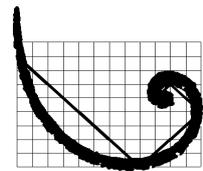
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Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>14</b>	Final Water Level (m bgl): <b>9.545</b>
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>137.26</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>137.98</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309174.324</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6419560.689</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>12.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
			13							
			14							
End of Log			15							

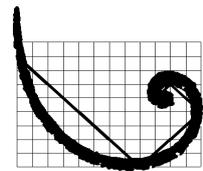
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Log By: **JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>16</b>	Final Water Level (m bgl): <b>12.68</b>
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>139.45</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>139.37</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309150.817</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6419502.221</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Bitumen</b>			0					0.2		
<b>Fill</b> Gravelly sand, brown, dry, well compacted, poorly sorted, no odour, no staining			1							
<b>Sandstone</b> Conglomerate, pale orange to brown, hard, friable with poorly sorted fine to coarse grains			2							
			3							
			4							
			5							
<b>Siltstone</b> Grey, dry, hard, moderately to slightly weathered			6							
			7							
			8							
<b>Sandstone</b> Grey, possible moisture, moderately weathered, possible moisture at 9.8mbgl, water at 14.5mbgl (after 72 hours)			9							
			10							

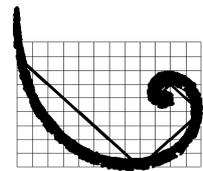
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>16</b>	Final Water Level (m bgl): <b>12.68</b>
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>139.45</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>139.37</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309150.817</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6419502.221</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
			13							
			14							
			15							
			16							
End of Log			17							
			18							
			19							
			20							

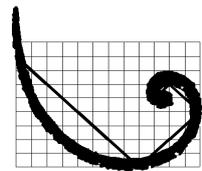
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>20</b>	Final Water Level (m bgl): <b>19.52</b>
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>138.79</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>138.66</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309241.557</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6419426.246</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Bitumen</b>			0					0.1		
<b>Fill</b> Gravelly sand, orange, dry, well compacted, coarse grained with gravel up to cobble sized, suspected road base, no odour, no staining			0.4		DS	N		0.2	BF_MW03_0.4-0.5	
<b>Sandstone</b> Conglomerate, pale orange, dry, hard			1							
			2							
			3							
			4							
			5							
			6							
			7							
			8							
			9							
<b>Siltstone</b> Grey, dry, moderately to slightly weathered, water at 18.8mbgl (after 72 hours), borehole reinstated			9.8							
			10							

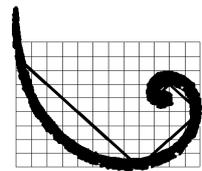
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>20</b>	Final Water Level (m bgl): <b>19.52</b>
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>138.79</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>138.66</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309241.557</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6419426.246</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
			13							
			14							
			15							
			16							
			17							
			18							
			19							
			20							

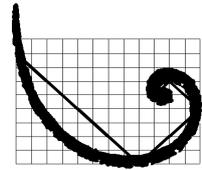
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309100</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6419438</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandstone</b> Conglomerate, orange, dry, hard, no odour, no staining, possible road base granite cobblestones			0		DS	N		0.1	BF_MW04_0.1-0.2	
<b>Shale</b> Pale grey, dry, hard, moderately weathered, becoming very hard at 8.0mbgl			1							
			2							
			3							
			4							
			5							

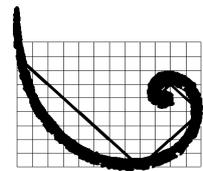
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309100</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6419438</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Dry at 10.0mbgl after 72 hours, well reinstated			6								
			7								
			8								
			9								
			10								

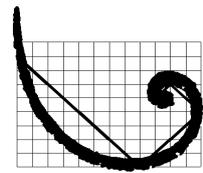
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>9</b>
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>200</b>	Elevation (Ground): <b>92.18</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>92.05</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>316247.411</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6411377.603</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravelly sand, minor silts, dark brown, fine to coarse sands, medium to coarse gravels, poorly sorted, no odour, no staining  <b>Fill</b> Reworked clay, brown with grey mottling, moist, plastic, some charcoal and shale gravel inclusions, no odour, no staining			0					0.2		
			1.4		DS	N			BF_MW05_0.5	
			1					0.2		
			0.5							
			2							
			3					0.2		
			3		US	N			BF_MW05_3.0	
			4					0.1		
<b>Clay</b> Gravelly brown, fine to soft, high plasticity, no odour, no staining, becoming gravelly at 6 to 6.5mbgl			5							

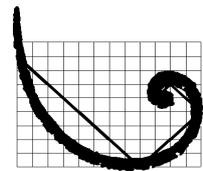
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>9</b>
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>200</b>	Elevation (Ground): <b>92.18</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>92.05</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>316247.411</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6411377.603</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
<b>Sandstone</b> Pale brown to orange, dry, moderately to well weathered, no odour, no staining			8							
			9							
			10							

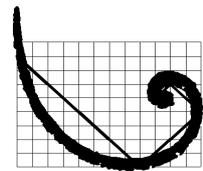
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Mick Hopkins</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>316183</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6411386</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Asphalt</b>										
<b>Fill</b> Sub-asphalt road base, gravelly sand, red brown, fine to coarse, poorly sorted, no odour, no staining					DS	N		0.2	BF_MW06_0.2	
<b>Fill</b> Reworked clay, brown with red and grey mottling, moist, plastic, gravel inclusions (up to cobble sized) throughout, no odour, no staining								0.8		
<b>Clay</b> Natural, red brown, moist, highly plastic, no odour, no staining, becoming grey with light brown mottling from 1.3mbgl, lower gravel content from 4.0mbgl			1					1.4		
								0.6		
			2							
								0.9		
			3		US	N		0.9	BF_MW06_3.0	
<b>Clay</b> Natural, red brown and grey mottled, dry, low plasticity, very stiff with some coarse red shale gravel and ironstone								0.6		
			4							
			5							

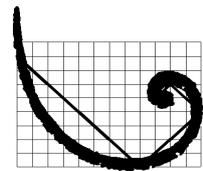
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Log By: **HC/JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Mick Hopkins</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>316183</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6411386</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
<b>Sandstone</b> Pale grey to brown, moderately weathered, no odour, no staining, layer of softer clayey material at 7.8 to 8.2mbgl			7							
<b>Clay</b> Gravelly clay, brown, white shale gravel, medium plasticity, firm			9							
<b>Sandstone</b> Pale orange, moderately weathered, dry at 10.0mbgl after 72 hours, well reinstated			10							

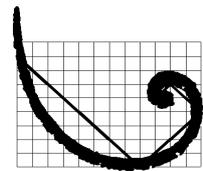
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Log By: **HC/JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>200</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Mick Hopkins</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>316244</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6411349</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, brown grey, dry, some coarse gravel (angular), no odour, no staining			0.7		DS	N		0.7	BF_MW07_0.15	
<b>Fill</b> Reworked clay, brown with red and grey mottling, moist, some plasticity, charcoal/coal fragments throughout, some shale gravel inclusions, no odour, no staining			1.6							
<b>Clay</b> Natural, light brown, moist to dry, highly plastic, no odour, no staining			1					1		
			2							
			2.4		US	Y		1	BF_MW07_2.4	
<b>Sandstone</b> Pale grey with red bands, dry, moderately weathered, turning pale orange between 3.5 and 4.0mbgl, well dry after 72 hours, well reinstated			3							
			4							
			5							

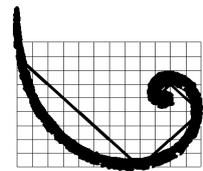
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>200</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Mick Hopkins</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>316244</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6411349</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

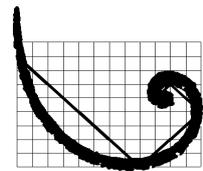
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Log By: **HC/JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>304961</b>
Drill Method: <b>HA/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415302</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Silty clay with gravel, light brown, moist, soft, moderate plasticity, homogeneous, no odour, no staining, becoming stiff from 0.4mbgl			0		DS	N		0.1	BF_MW08_0.2	
								0		
								0		
<b>Silty Clay</b> Grey with orange brown mottling, moist, medium stiff, non plastic, friable, homogeneous, minor siltstone gravel throughout, no odour, no staining			1					0.1		
								0.1		
								0.1		
<b>Siltstone</b> Grey, dry, hard, weathered lenses throughout, some brown, no odour, no staining			2							
								0.2	BF_MW08_2.6	
			3							
			4							
			5							

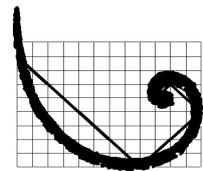
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>304961</b>
Drill Method: <b>HA/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415302</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

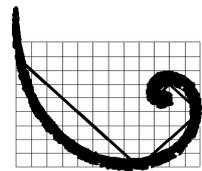
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>304961</b>
Drill Method: <b>HA/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415302</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
<b>Conglomerate</b> Light grey with dark grey and green grey, dry, hard, rounded to well rounded gravels included, no odour, no staining. Well dry at 15.0mbgl after 72 hours, well reinstated			13							
			14							
			15							

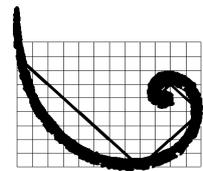
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): <b>12.94</b>
Drill Finish Date: <b>12/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>223.5</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>224.11</b>
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>303943.88</b>
Drill Method: <b>HA/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415287.862</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): <b>11</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Clay</b> Sandy clay with gravel, brown, moist, soft, non plastic, homogeneous, no odour, no staining  <b>Clay</b> Brown, moist, soft, high plasticity, homogeneous, no odour, no staining, becoming red brown from 0.6mbgl			0		DS	N		0.1	BF_MW09_0.2	
			0					0		
			1					0		
<b>Sandy Clay</b> Red brown, moist, stiff, non plastic, homogeneous, no odour, no staining			2					0.2		
<b>Silty Sand</b> Orange brown, moist, dense, fine grained, well sorted, homogeneous, no odour, no staining			3					0.1		
			4		US	Y			BF_MW09_3.9	
<b>Siltstone</b> Orange brown, dry, hard, weathered lenses throughout, becoming softer at 10.8mbgl, moist from 11.0mbgl			5							

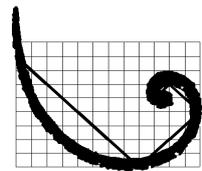
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): <b>12.94</b>
Drill Finish Date: <b>12/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>223.5</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>224.11</b>
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>303943.88</b>
Drill Method: <b>HA/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415287.862</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): <b>11</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

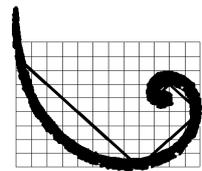
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Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): <b>12.94</b>
Drill Finish Date: <b>12/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>223.5</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>224.11</b>
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>303943.88</b>
Drill Method: <b>HA/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6415287.862</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): <b>11</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
			13							
			14							
			15							

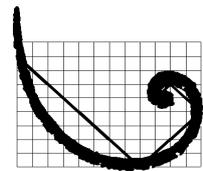
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW10**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>13</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>13/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type:	Elevation (Case): <b>0</b>
Driller: <b>Justin Collier</b>	Casing Diam. (mm):	Easting (MGA): <b>302990</b>
Drill Method: <b>HA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415264</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandstone</b> Weathered, brown, dry, dense, fine to coarse grained, well sorted, homogeneous, no odour, no staining  <b>Sandstone</b> Brown, dry, hard, interlayered with weathered sandstones above, no odour, no staining			0		DS	N		0	BF_MW10_0.1	
			1							
			2							
			3							
			4							
			5							

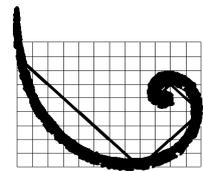
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW10**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>13</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>13/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type:	Elevation (Case): <b>0</b>
Driller: <b>Justin Collier</b>	Casing Diam. (mm):	Easting (MGA): <b>302990</b>
Drill Method: <b>HA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415264</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

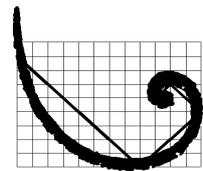
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_MW11**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>13/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type:	Elevation (Case): <b>0</b>
Driller: <b>Justin Collier</b>	Casing Diam. (mm):	Easting (MGA): <b>302054</b>
Drill Method: <b>HA/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415253</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Sand</b> Brown, moist, loose, fine sand with some coarse gravel, moderately sorted, homogeneous, no odour, no staining			0.1		DS	N		0.1	BF_MW11_0.2	
<b>Clayey Sand</b> Brown, moist, loose, fine to medium coarse sand, well sorted, homogeneous, no odour, no staining			0					0		
<b>Sandy Clay</b> Sandy clay with gravel, dark brown, moist, soft, low plasticity, homogeneous, inclusions of extremely weathered siltstone gravels, no odour, no staining			1					0.1		
<b>Clayey Sand</b> Red brown, moist, medium dense, fine grained, well sorted, homogeneous, no odour, no staining			0.5					0.5		
<b>Sandy Clay</b> Red brown, soft, moist, low plasticity, homogeneous, no odour, no staining, plasticity increasing with depth			2					0.7		
			3					0.6		
			4		US	N		1.9	BF_MW11_4.0	
			5		US	N		1	BF_MW11_5.0	

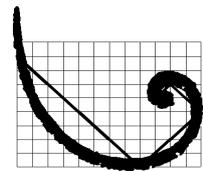
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_MW11**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>13/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type:	Elevation (Case): <b>0</b>
Driller: <b>Justin Collier</b>	Casing Diam. (mm):	Easting (MGA): <b>302054</b>
Drill Method: <b>HA/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415253</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
<b>Silty Sand</b> Brown, moist, medium dense, fine grained, well sorted, homogeneous, no odour, no staining. Gauged dry after 72 hours, well reinstated			7							
			8							
			9							
			10							

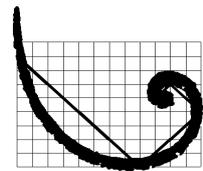
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Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>1.8</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309092</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6419564</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Asphalt</b>			0					0		
<b>Fill</b> Gravelly sand, brown, dry, well consolidated, poorly sorted, medium to coarse sand, no odour or staining.					DS	N		0	BF_SB01_0.4-0.5	
<b>Fill</b> Clay, some sand and gravel, dry, firm, medium plasticity, no odour or staining. Cobbles at 0.8 to 1.2mbgl			1					0.1		
					US	N		0.1	BF_SB01_1.8	
End of Log			2							
			3							
			4							
			5							

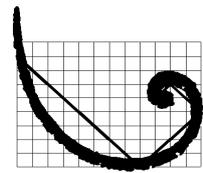
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BF\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>1.3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309072</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6419513</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Asphalt</b>										
<b>Fill</b> Gravelly sand, some clay, dry, brown, well compacted, poorly sorted, no odour, no staining					DS	N		0.1	BF_SB02_0.1-0.2	
<b>Clay</b> Sandy, brown, soft becoming very stiff with depth, low plasticity, no odour, no staining, sandstone gravel from 1.1mbgl			1							
					DS	N		0	BF_SB02_1.3	
End of Log			2							
			3							
			4							
			5							

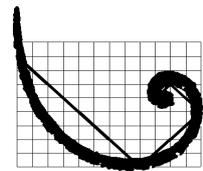
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Log By: **JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_SB03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>3.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309202</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6419511</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Asphalt</b>								0.1		
<b>Fill</b> Clay, gravelly sand, brown, well compacted								0.2	BF_SB03_0.4-0.5	
<b>Fill</b> Clay, some sand and rare gravel, brown, dry, firm, low plasticity, gravelly clay layer from 1.3 to 1.6mbgl, no odour, no staining			1		DS	N		0.2		
<b>Clay</b> Brown, moist, firm, moderate plasticity			2					0.2		
<b>Sandstone</b> Orange and grey with some coarse sandy lenses, moderate plasticity, weathered, no odour, no staining			3		US	N		0.1	BF_SB03_3.0	
End of Log			4							
			5							

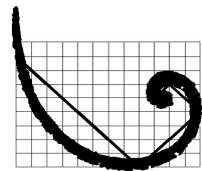
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Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_SB04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>3/12/2013</b>	Total Depth (m): <b>0.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309274</b>
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6419481</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Asphalt</b>										
<b>Fill</b> Sand, gravelly clay, dry, well consolidated, poorly sorted, no odour, no staining										
					DS	N		0.1	BF_SB04_0.4-0.5	
End of Log			1							
			2							
			3							
			4							
			5							

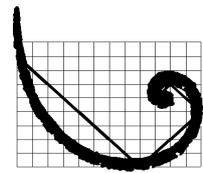
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: JG

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_SB05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/12/2013</b>	Total Depth (m): <b>3.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Mick Hopkins</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>316201</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6411405</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy gravel (road base), brown and red, dry, fine to coarse gravels, angular gravels, poorly sorted, no odour, no staining  <b>Fill</b> Rework of sandy clay, brown with grey mottling, dry to moist, gravel inclusions (shale), no odour, no staining					DS	N		1.2		
								0.3	BF_SB05_0.5	
									0.4	
<b>Clay</b> Red brown, some gravel, dry, low plasticity, stiff, increasing red shale ironstone gravel from 3.0mbgl, no odour, no staining			2					0.8		
			3		US	N		0.5	BF_SB05_3.0	
End of Log			4							
			5							

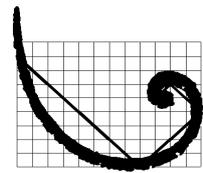
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_SB06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>3.4</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>85</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Mick Hopkins</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>316211</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6411395</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravelly sand, red brown with red, moist, fine to medium grained sand, poorly sorted, gravels are angular, coarse, no odour, no staining								0.1		
<b>Fill</b> Reworked clay, brown with grey and red mottling, moist, plastic, some gravels inclusions (cobble sized gravel, rounded), charcoal inclusions, no odour, no staining					DS	N		0.4	BF_SB06_0.5	
<b>Clay</b> Natural, red brown, moist, highly plastic, no odour, no staining, becoming grey with brown mottling from 1.4mbgl, some weathered shale gravel inclusions			1					0.1		
								0.5		
			2							
<b>Clay</b> Brown and grey mottled, dry, firm to stiff, low plasticity, shale and ironstone gravel bands at 3.0 to 3.2mbgl, sandstone gravel at 3.3mbgl					US	N		0.5	BF_SB06_2.7	
								0.9		
			3							
End of Log										
			4							
			5							

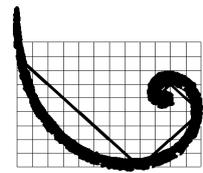
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BF\_SB07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **6/12/2013** Total Depth (m): **3.1** Final Water Level (m bgl): -  
 Drill Finish Date: **6/12/2013** Hole Diam. / Width (mm): **85** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Mick Hopkins** Casing Diam. (mm): **N/A** Easting (MGA): **316213**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6411372**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Asphalt</b>			0					0.7		
<b>Fill</b> Sand, road base, dark grey, moist, fine to medium grained, no odour, no staining, minor gravels			0.7							
<b>Fill</b> Sandy gravel, dark grey, moist to dry, coarse to cobbles, rounded and angular, river gravels/shale, no odour, no staining			0.7		DS	N			BF_SB07_0.75	
<b>Fill</b> Reworked clay, dark grey and brown, moist, plastic, gravel inclusions, no odour, no staining			1					0.7		
<b>Clay</b> Natural, grey with brown mottling, moist, plastic, no odour, no staining, becoming brown with grey mottling from 1.4mbgl			1.4		DS	N		1.4	BF_SB07_1.5	
<b>Clay</b> Orange and grey mottled, some sand, low plasticity, moist, firm becoming stiff, increasing sand content from 2.5mbgl			2							
			3		US	N		0.9	BF_SB07_2.9	
End of Log			4							
			5							

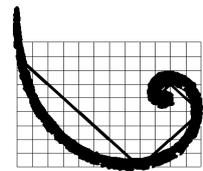
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Log By: **HC/JG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BG\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>0.12</b>
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>170.15</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>170.03</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307551.801</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414055.286</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3.8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy clay with some gravel, brown, dry, stiff, non plastic, organic matter, rootlets throughout			0		DS	N		0.4	BG_MW01_0.2	
<b>Gravelly Clay</b> Brown, moist, soft, low plasticity, no odour, no staining, sub rounded fine gravels throughout			0.5							
<b>Silty Clay</b> Grey, moist, soft, medium plasticity, organic odour, no staining			1.5							
<b>Silty Clay</b> Red brown with grey mottling, moist, firm to stiff, medium plasticity, organic odour, no staining			2.5							
<b>Gravelly Clay</b> Red brown with grey mottling, sub rounded gravels			3.5							
<b>Shale</b> Extremely weathered bedrock			4.0		US	N		1.4	BG_MW01_3.8	
			5.0							

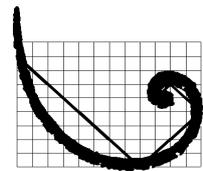
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BG\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>0.12</b>
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>170.15</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>170.03</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307551.801</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414055.286</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3.8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Gravelly Clay</b> Red brown, moist			6							
End of Log			7							
			8							
			9							
			10							

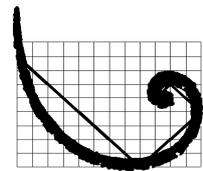
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BG\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>6.3</b>	Final Water Level (m bgl): <b>0.14</b>
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>169.92</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.78</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307486.783</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414076.747</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good Condition, no staining			0		DS	N			BG_MW02_0.2	
<b>Fill</b> Sandy gravel, brown, moist, loose, fine to medium grained, poorly sorted, sub rounded, no odour, no staining			0							
<b>Silty Clay</b> Silty clay with some gravel, grey mottled brown, moist, soft, low plasticity, no odour, no staining, large shale boulders from 1.3mbgl			1							
<b>Gravelly Silty Clay</b> Grey mottled brown, dense, moist, no odour, no staining			3				1.3			
<b>Clayey Silt</b> Dark grey, low plasticity, soft, minor coarse gravels			4							
<b>Gravelly Silty Clay</b> Grey with orange brown mottling			4				1			
<b>Clay</b> Dark grey with brown mottles			5							

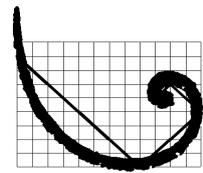
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BG\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>6.3</b>	Final Water Level (m bgl): <b>0.14</b>
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>169.92</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.78</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307486.783</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414076.747</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Silty Clay</b> Grey to dark grey, soft, very moist, high plasticity, organic odour, no staining										
<b>Silty Clay</b> Silty clay with weathered shale, grey with brown mottling, very moist, high plasticity, organic odour, no staining			6		US	Y		1.3	BG_MW02_6.3	
End of Log			7							
			8							
			9							
			10							

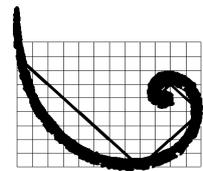
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BG\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>4</b>	Final Water Level (m bgl): <b>1.15</b>
Drill Finish Date: <b>13/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>170.19</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>170.11</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307471.044</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414114.267</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>2</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy clay with some gravel, brown, dry, stiff, non-plastic, no odour, no staining, rootlets throughout			0		DS	N		0.1	BG_MW03_0.2	
<b>Gravelly Clay</b> Orange brown, moist, soft, non-plastic, no odour, no staining			1							
<b>Gravelly Clay</b> Orange brown, dry, medium plasticity, no odour, no staining			2		DS	N		0.1	BG_MW03_1.5	
<b>Gravelly Clay</b> Grey, soft, very moist to wet, high plasticity, no odour, no staining			3		US	N		1.1	BG_MW03_2.0	
<b>Gravelly Clay</b> Weathered bedrock, orange brown, dry, medium plasticity, firm			4					0.7		
End of Log			5							

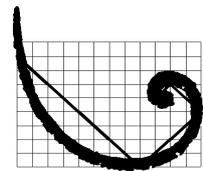
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BG\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>4.5</b>	Final Water Level (m bgl): <b>2.2</b>
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>170.38</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>170.24</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307492.543</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414181.956</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>2.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy clay with some gravel, brown, dry, stiff, non-plastic, no odour, no staining, weathered shale pieces (reworked) and blue metal at 0.5mbgl			0		DS	N		0.1	BG_MW04_0.2	
<b>Gravelly Clay</b> Extremely weathered shale, moist, soft, non-plastic, no odour, no staining			1							
<b>Clayey Gravel</b> Grey brown, slightly moist, dense, angular quartz gravels and sub angular shale, fine to coarse gravel, no odour			2		US	N		1.4	BG_MW04_2.5	
<b>Silty Clayey Gravel</b> Dark grey, sub angular, coarse gravels (shale)			3							
<b>Shale</b> Extremely weathered, grey brown, dry, coarse shale gravels intermixed with silty clay, firm, no odour, no staining			4							
<b>Shale</b> Extremely weathered, dark grey with orange mottling, moist, low plasticity, occasional small roots			4					0.6		
<b>Shale</b> Extremely weathered, orange brown, firm, medium plasticity, moist, no odour, no staining			5							
End of Log										

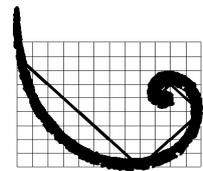
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BG\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>5.5</b>	Final Water Level (m bgl): <b>2.055</b>
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>170.31</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>170.14</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307536.809</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414174.912</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand with some gravel, dry, dense, fine to medium grained, poorly sorted, no odour, no staining			0		DS	N		0.2	BG_MW05_0.2	
<b>Gravelly Clay</b> Orange brown, moist, soft, non-plastic, no odour, no staining, shale fragments throughout			1							
<b>Silty Clay</b> Silty clay with extremely weathered shale, dark grey, moist, stiff, low plasticity, no odour, no staining, minor roots			2					2		
<b>Gravelly Clay</b> Brown orange, slightly moist, fine to medium sub angular poorly graded gravels, stiff medium plasticity clay, no odour, no staining			3							
<b>Clay</b> Orange brown with grey mottling, moist, medium plasticity, no odour, no staining			4							
<b>Gravelly Clay</b> Orange brown, very moist, high plasticity, coarse, sub angular gravel, no odour			5		US	N		2.6	BG_MW05_3.5	

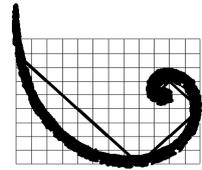
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BG\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>5.5</b>	Final Water Level (m bgl): <b>2.055</b>
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>170.31</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>170.14</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307536.809</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414174.912</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
End of Log										

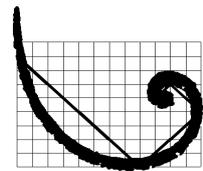
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BG\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>2.895</b>
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>171.65</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>171.55</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307569.451</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414129.721</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand with some gravel, dry, dense, fine to medium grained, poorly sorted, no odour, no staining			0		DS	N		0.8	BG_MW06_0.2	
<b>Clay</b> Red brown, moist, medium stiff, low plasticity, rootlets throughout, grey mottled red from 1.1mbgl, rootlets throughout			1							
<b>Gravelly Clay</b> Gravelly clay with weathered shale, grey clay with red brown coarse gravels, slightly moist, very firm, low plasticity, no odour, no staining			2							
			3		US	N		1.8	BG_MW06_3.0	
			4					1.8		
<b>Clay</b> Red brown, moist to very moist			5							

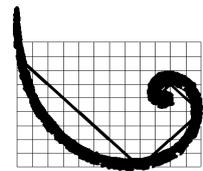
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BG\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>2.895</b>
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>171.65</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>171.55</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307569.451</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414129.721</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Shale</b> Bedrock, grey, dry, no odour, no staining			6							
End of Log			7							
			8							
			9							
			10							

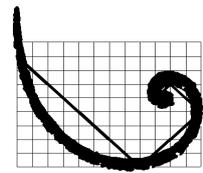
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BG\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>5.5</b>	Final Water Level (m bgl): <b>3.99</b>
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): <b>176.11</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>176.03</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307602.182</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414071.744</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy gravel (gravel road base), grey, dry, dense, fine to medium, angular, poorly sorted, no odour, no staining			0		DS	N		0	BG_MW07_0.2	
<b>Fill</b> Sandy gravel, orange brown, moist, medium dense, fine to medium			0.5							
<b>Sandy Clay</b> Sandy clay with some gravel, orange brown, moist, non plastic, no odour, no staining			1							
<b>Siltstone</b> Siltstone with some clay, moist, orange brown, highly weathered, no odour, no staining, becoming light grey at 5.0mbgl			1.6		DS	N		0	BG_MW07_1.6	
			2							
			3							
			4							
			5							

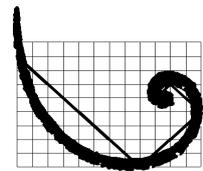
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BG\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>5.5</b>	Final Water Level (m bgl): <b>3.99</b>
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): <b>176.11</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>176.03</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307602.182</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414071.744</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
End of Log										

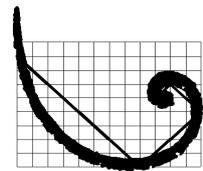
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>4.03</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.19</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.08</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307374.583</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413794.19</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clayey Silt, brown, dry, no odours no staining			0		DS	N		0	BH_MW01_0.1	
<b>Fill</b> Silty Gravel, brown, dry, fine to coarse, sub rounded gravels, medium dense, no odours								0		
<b>Fill</b> Shale boulders, weathered, grey, dense								0.1		
<b>Fill</b> Gravelly clay, grey, mottled orang-brown, moist, medium-stiff, non-plastic, no odour or staining, weathered shale and sandstone fragments throughout			1					0.1		
			2					0.1		
			3					0.1		
			4					0.1		
<b>Fill</b> Silty clay, olive-brown, moist, soft, high plasticity, no odour or staining					US	Y		0.2	BH_MW01_4.5	
<b>Clay</b> Red-brown, mottled grey, moist, stiff, no odour or staining, fully weathered shale			5							

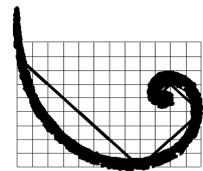
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Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>4.03</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.19</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.08</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307374.583</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413794.19</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0		
			7					0		
			8					0.1		
			9					0.1		
End of Log			10							

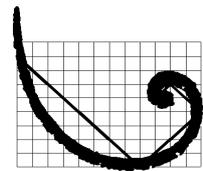
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Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>8</b>	Final Water Level (m bgl): <b>2.84</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.17</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307419.737</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413742.887</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clayey Silt  <b>Fill</b> Extremely weathered shale/gravels with silt intermixed, grey, dry, dense, no odour or stain			0		DS	N		0	BH_MW02_0.1	
					DS	Y		0	BH_MW02_0.5	
			1		DS	Y		1	BH_MW02_1.0	
								0.1		
			2				0.1			
<b>Fill</b> Clay, dark grey, moist, very soft, high plasticity, no odour or staining  <b>Gravelly Clay</b> Orange-brown, moist, medium stiff, non-plastic, no odour or staining, highly weathered shale					US	Y		0.2	BH_MW02_3.7	
								0.1		
			4					0.1		
			5				0.1			

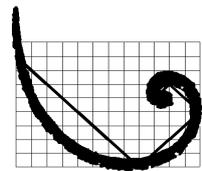
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Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>8</b>	Final Water Level (m bgl): <b>2.84</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.17</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307419.737</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413742.887</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
					US	Y		0.1	BH_MW02_5.7	
<b>Silty Clay</b> Grey-brown, moist to wet, soft, medium plasticity, no odour or staining			6							
			7					0		
			8					0.1		
End of Log										
			9							
			10							

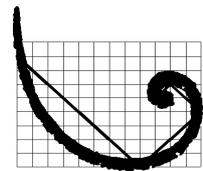
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Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>1.415</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.96</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.86</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307503.506</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413630.895</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b>			0							
<b>Fill</b> Gravels, orange-brown, sub rounded, coarse gravel, dense, no odour			0.1		DS	Y		0	BH_MW03_0.3	
<b>Sandstone</b> Extremely weathered sandstone/shale, orange and brown (clays), minor red iron stone gravel, no odour no staining. Red iron oxide mottles throughout			1		DS	Y		0.1	BH_MW03_1.0	
			2					0.1		
			3					0.1		
			4					0.1		
			4.5		US	Y		0	BH_MW03_4.5	
			5					0.1		

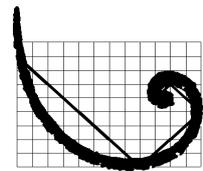
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Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>1.415</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.96</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.86</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307503.506</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413630.895</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0.1		
<b>Silty Clay</b> Grey, wet, medium stiff, moderate plasticity, no odour or staining. Completely weathered shale.			7					0		
			8					0		
			9					0.1		
End of Log			10							

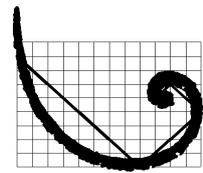
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Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>3.54</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.98</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.83</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307586.064</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413690.088</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Acid etching in adjacent open drain evident, no staining			0		DS	Y		0.2	BH_MW04_0.2	
<b>Fill</b> Gravelly sand, red, moist, medium dense, fine to coarse, poorly sorted, no odour or staining			0.3					0.3		
<b>Fill</b> Silty clay with trace gravel, grey-brown mottled orange, moist, soft, low plasticity, no odour or staining, trace rootlets			1					0.2		
<b>Fill</b> Clayey gravel, brown moist, medium dense, fine to coarse, poorly sorted, subangular, no odour or staining			1					0.1		
<b>Silty Clay</b> Brown, moist, soft, medium plasticity, no odour or staining. Weathered shale pieces increasing with depth			2					0.2		
			3		US	Y		0.1	BH_MW04_3.0	
<b>Shale</b> Brown, dry, very fine grained, soft, highly weathered, no odour or staining			4					0.1		
			5					0.1		

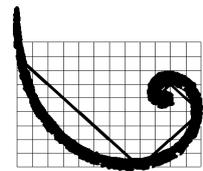
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>3.54</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.98</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.83</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307586.064</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413690.088</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0.1		
<b>Clay</b> Grey, mottled brown, moist, soft, medium plasticity, no odour or staining, fully weathered shale			7					0.2		
			8					0.1		
			9					0.1		
End of Log			10							

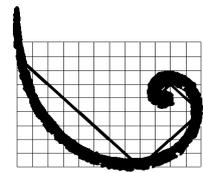
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>9.9</b>	Final Water Level (m bgl): <b>7.05</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.25</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.84</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306821.781</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414074.675</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7</b>	

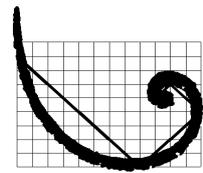
Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, brown, dry, dense, fine grained, moderately sorted, no odour or staining			0		DS	N		0	BH_MW05_0.2	
<b>Clayey Gravel</b> Orange-brown, dry, dense, medium to coarse, poorly sorted, subangular, no odour or staining. Shale pieces throughout			0.1					0.1		
			1					0.1		
			2					0		
<b>Clay</b> Black, mottled grey, moist, soft, medium, plastic, organic odour			3					0		
<b>Sandy Clay</b> Brown, mottled, orange, grey, moist, soft, non plastic, no stain no odour			4					0		
			5					0		

**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**  
 Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>9.9</b>	Final Water Level (m bgl): <b>7.05</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.25</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.84</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306821.781</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414074.675</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Clay</b> Black, mottled grey, moist, soft, medium, plastic, organic odour  <b>Sandy Clay</b> Brown, mottled red and grey, moist, soft, non plastic, no staining, no odour			6		US	Y		0	BH_MW05_6.0	
			7					0		
<b>Shale</b> Weathered shale, red brown, moist, friable no odour, no staining			8					0		
			9					0		
End of Log			10							

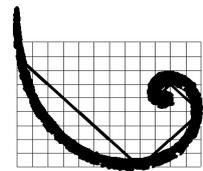
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>8.9</b>	Final Water Level (m bgl): <b>4.135</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.34</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>181.02</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306773.017</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414045.059</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, brown, dry, dense, fine grained, moderately sorted, no odour or staining			0		DS	N		0.3	BH_MW06_0.2	
<b>Fill</b> Clayey gravel, grey-brown, moist, dense, fine to coarse, poorly sorted, subangular, no odour or staining. Shale boulders and cobbles throughout			0.3					0.3		
			1					0.3		
			2					0.2		
<b>Sandy Clay</b> Brown, mottled black, moist, soft, non plastic, no stain, no odour			2							
<b>clay</b> Black, mottled grey, moist, soft, medium, plastic, organic odour			3							
<b>Sandy Clay</b> Grey, mottled red, moist, soft, non-plastic, no stain, no odour			3							
<b>Sandy Clay</b> Grey, mottled brown, moist, soft, non-plastic, no stain no odour			4							
			5		US	Y			BH_MW06_4.9	

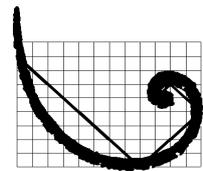
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>8.9</b>	Final Water Level (m bgl): <b>4.135</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.34</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>181.02</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306773.017</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414045.059</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
<b>Shale</b> Weathered, brown, wet, friable, no stain no odour			7							
			8							
End of Log			9							
			10							

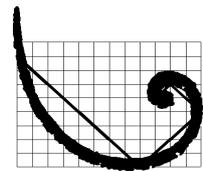
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>3.8</b>	Final Water Level (m bgl): <b>3.18</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.06</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.98</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306640.867</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414054.684</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	N		0.2	BH_MW07_0.2	
<b>Fill</b> Gravelly clay, brown, moist, soft, non-plastic, no odour or staining, weathered shale and iron stone gravel throughout			0.1		DS	Y		0.1	BH_MW07_0.5	
<b>Shale</b> Grey, dry, no stain, no odour			0.8		US	Y			BH_MW07_0.8	
End of Log			4							
			5							

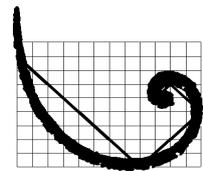
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Log By: SM/TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>7</b>	Final Water Level (m bgl): <b>2.16</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.99</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.82</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306622.375</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414142.374</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Acid etching evident on concrete surface adjacent location			0		DS	Y		0.1	BH_MW08_0.25	
<b>Fill</b> Gravelly sand, grey, dry, hard, coarse grained, poorly sorted, subangular, no odour or staining (compacted roadbase)			0.1					0.2		
<b>Fill</b> Gravelly clay, orange-brown, moist, stiff, non-plastic, no odour or staining			1					0.1		
<b>Sandstone</b> Grey, dry. Potential hydrocarbon odour noted from 3.0m bgl. Wet from 5.5m bgl			2							
			3					36.6		
			4					27.8		
			5					16.6		

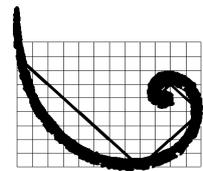
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>7</b>	Final Water Level (m bgl): <b>2.16</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.99</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.82</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306622.375</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414142.374</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0		
End of Log			7					0		
			8							
			9							
			10							

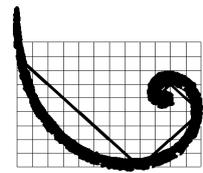
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>1.8</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306681</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414176</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	N		0.3	BH_SB01_0.2	
<b>Fill</b> Sandy clay with gravel, orange-brown, dry, stiff, non-plastic, no odour or staining, weathered shale fragments throughout			0.2					0.2		
			1					0.3		
								0.2		
<b>Shale</b> Weathered Shale, red brown, dry, friable, no stain no odour					US	Y		0	BH_SB01_1.7	
End of Log			2							
			3							
			4							
			5							

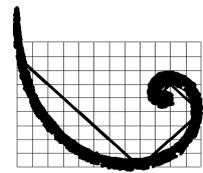
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>0.6</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306663</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414142</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining								0.2		
<b>Fill</b> Sandy gravel, grey, dry, loose, fine grained, poorly sorted, no odour or staining (road base)					DS	N		0.1	BH_SB02_0.5	
<b>Fill</b> Clayey gravel, brown, moist, dense, fine to coarse, poorly sorted, subangular, no odour or staining, shale pieces throughout										
<b>Shale</b> Grey, dry, fine grained										
End of Log										

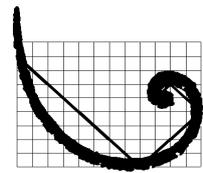
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_SB03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **18/11/2013** Total Depth (m): **1.2** Final Water Level (m bgl): -  
 Drill Finish Date: **20/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **306591**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6414014**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, brown, dry, medium dense, fine grained, moderately sorted, no odour or staining, rootlets throughout			0.1		DS	N		0.1	BH_SB03_0.2	
<b>Sandy Clay</b> Red-brown, dry, medium stiff, non-plastic, no odour or staining			0.1					0.1		
<b>Shale</b> Weathered, red, brown, dry, friable, no stain no odour			1.0		DS	Y		0.1	BH_SB03_1.0	
<b>Shale</b> Grey, dry			1.1		US	Y		1.1	BH_SB03_1.1	
End of Log			2							
			3							
			4							
			5							

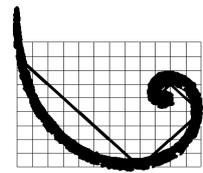
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_SB04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **18/11/2013** Total Depth (m): **1.05** Final Water Level (m bgl): -  
 Drill Finish Date: **20/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **306592**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6414065**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty Sand, grey, dry, loose, fine to medium, poorly sorted, no odour or staining					DS	N		0.1	BH_SB04_0.3	
<b>Sandy Clay</b> Orange-brown, moist, soft, low plasticity, no odour or staining. Highly weathered shale pieces throughout.					DS	Y		0.2	BH_SB04_0.5	
<b>Shale</b> Grey, dry, no stain, no odour			1							
End of Log										
			2							
			3							
			4							
			5							

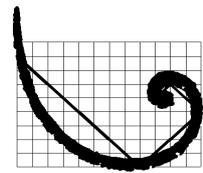
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_SB05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>1.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>85</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307537</b>
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413576</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Silt</b> Brown, dry, hard, low plasticity, no odour, salt crust at surface adjacent to low area.			0		DS	N		0	BH_SB05_0.1	
<b>Shale</b> Extremely weathered, grey with orange staining			1					0		
<b>Shale</b> Siltstone, grey brown, dry, friable/fractured, becoming harder with depth			1.55		DS	Y		6.6	BH_SB05_1.55	
End of Log			2							
			3							
			4							
			5							

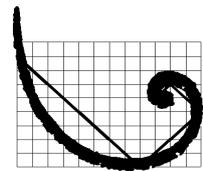
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_SB06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>7/11/2013</b>	Total Depth (m): <b>1.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>80</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307563</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413637</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining										
<b>Fill</b> Gravelly sandy clay, red-brown, moist, soft, low plasticity, no odour or staining					DS	N		0.1	BH_SB06_0.25	
<b>Gravelly Clay</b> Grey, mottled orange, moist, low plasticity, no odour or staining			1					0.1		
<b>Shale</b> Grey, moist, soft, highly weathered								0.2		
					US	Y		0.1	BH_SB06_1.6	
End of Log			2							
			3							
			4							
			5							

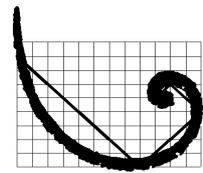
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BH\_SB07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **26/11/2013** Total Depth (m): **3.1** Final Water Level (m bgl): -  
 Drill Finish Date: **28/11/2013** Hole Diam. / Width (mm): **85** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **307553**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413727**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	N		0	BH_SB07_0.2	
<b>Fill</b> Gravelly sand, red-brown, moist, loose, fine to coarse, poorly sorted, no odour or staining								0		
<b>Fill</b> Gravelly clay, grey-brown mottled orange, moist, soft, non-plastic, no odour or staining			1					0.1		
								0		
			2							
<b>Fill</b> Reworked siltstone, black, dry, no odour, no staining								2.4		
<b>Fill</b> Gravelly clay, brown with grey mottling, moist, gravel inclusions, shale, no odour, no staining			3							
End of Log			4							
			5							

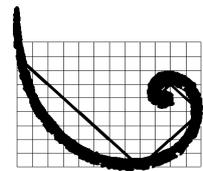
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BH\_SB08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>8/11/2013</b>	Total Depth (m): <b>3.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>80</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307602</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413745</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b>										
<b>Fill</b> Clay, orange-brown, moist, high plasticity, minor coarse to large gravels, subrounded, firm, no odour or staining					DS	N		0	BH_SB08_0.3	
					DS	Y		0	BH_SB08_0.5	
<b>Clay</b> Grey, mottled orange-brown, moist, medium stiff, moderate plasticity, no odour or staining, Friable weathered shale throughout								0		
								0.3		
								0.1		
			3		US	Y		0.1	BH_SB08_3.0	
End of Log			4							
			5							

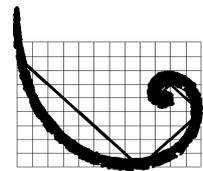
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BI\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **12/11/2013** Total Depth (m): **14.5** Final Water Level (m bgl): **7.82**  
 Drill Finish Date: **20/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): **179.94**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **179.83**  
 Driller: **Eric Grima** Casing Diam. (mm): **50** Easting (MGA): **307382.151**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Gatic** Northing (MGA): **6414012.189**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **8.7**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0					0		
<b>Fill</b> Gravelly clay, brown, moist, soft, low plasticity, no odour or staining			0.1		DS	N		0.1	BI_MW01_0.5	
<b>Gravelly Clay</b> Brown mottled, orange and grey, moist, soft, low plasticity, no odour or staining, weathered shal fragments throughout			1					0		
			2					0		
<b>Gravelly Clay</b> Grey brown, soft, moist, high plasticity, no odour or staining			3		US	Y		0.1	BI_MW01_3.0	
<b>Sandstone</b> Highly weathered, orange brown with red/brown gravels, very dense, cobbles, no odour or staining			4					0		
<b>Sandstone</b> Bedrock			5							

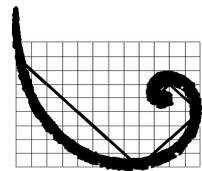
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BI\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>14.5</b>	Final Water Level (m bgl): <b>7.82</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.94</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.83</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307382.151</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414012.189</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8.7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
<b>Clay</b> Dark brown			9							
			10							

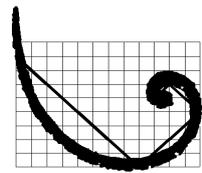
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BI\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>14.5</b>	Final Water Level (m bgl): <b>7.82</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.94</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.83</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307382.151</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414012.189</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8.7</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Gravelly Clay Red-brown, moist			11 12 13 14							
End of Log			15							

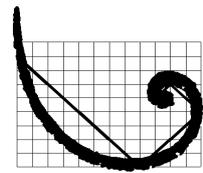
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BI\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>10.3</b>	Final Water Level (m bgl): <b>7.29</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.83</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307405.821</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413958.298</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	N		0.2	BI_MW02_0.2	
<b>Fill</b> Gravelly Clay, brown, moist, soft, non-plastic, no odour or staining			0.2					0.2		
<b>Fill</b> Silty Clay with some gravel, brown, moist, soft, non-plastic, no odour or staining, weathered shale fragments throughout			1					0.1		
<b>Fill</b> Gravelly Clay, brown, mottled orange and grey, moist, soft, non-plastic, no odour or staining			2		DS	Y		0.2	BI_MW02_1.5	
			3					0		
			3		US	Y		0.1	BI_MW02_3.0	
<b>Fill</b> Gravelly clay, orange-brown and red, coarse, gravels to cobbles, moist, medium-dense, no odours			4					0.2		
<b>Fill</b> Silty Clay, dark brown, moist, medium plasticity, firm, no odours			4							
<b>Fill</b> Gravelly clay, orange mottled pale grey, moist, no odours			4							
<b>Fill</b> Clayey gravel, brown, moist, dense to very dense			4							
<b>Sandstone</b> Weathered, moist, brown, very dense, no odours			5							
<b>Sandstone</b> Orange-brown, moist, very dense, no odours			5							

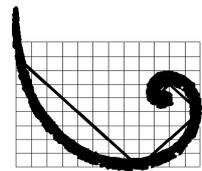
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BI\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>10.3</b>	Final Water Level (m bgl): <b>7.29</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.83</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307405.821</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413958.298</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

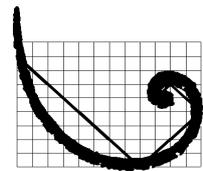
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BI\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>10.3</b>	Final Water Level (m bgl): <b>7.29</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.83</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307405.821</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413958.298</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>7.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
End of Log			11 12 13 14 15							

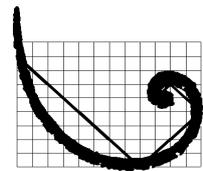
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BI\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>12</b>	Final Water Level (m bgl): <b>7.435</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.06</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307447.614</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413982.628</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>10.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0							
<b>Fill</b> Sandy gravel, grey, moist, dense, fine to medium, poorly sorted, angular, no odour or staining			0.1		DS	Y		0.1	BI_MW03_0.25	
<b>Fill</b> Gravelly clay, grey, mottled orang-brown, moist, medium-stiff, low plasticity, no odour, or staining, weathered shale pieces throughout			0.6		DS	N		0.1	BI_MW03_0.6	
			1					0.2		
								0.1		
								0.2		
<b>Fill</b> Gravelly clay, brown with grey mottling, moist, soft to firm, coarse angular gravels, no odour			2		US	Y		0.2	BI_MW03_2.0	
			3					0.3		
			4		US	Y		0.3	BI_MW03_3.8	
			5							

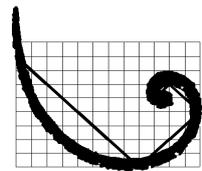
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BI\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>12</b>	Final Water Level (m bgl): <b>7.435</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.06</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307447.614</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413982.628</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>10.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Clayey Gravel</b> Weathered bedrock, moist, dense, fine to coarse			6							
			7							
			8							
			9							
<b>Silty Clay</b> Brown, very moist, no odour			10							

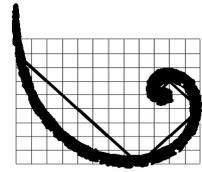
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

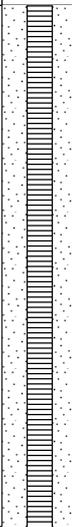
**ID: BI\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>12</b>	Final Water Level (m bgl): <b>7.435</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.06</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307447.614</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413982.628</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>10.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11 12							
End of Log			12 13 14 15							

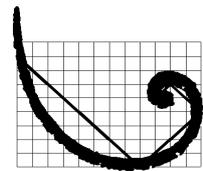
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305326</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413730</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Brown, dry, soft, non-plastic, fine to medium grained, sub angular gravel, no staining, no odour					DS	N		0	BJ_MW01_0.2	
					DS	Y		0	BJ_MW01_0.5	
<b>Shale</b> Weathered, red/brown, dry, friable, no staining, no odour			1							
			2							
			3							
			4							
			5							

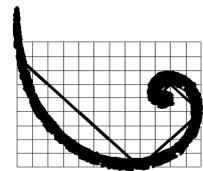
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BJ\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305326</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413730</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
<b>Shale</b> Grey, dry, hard, no staining, no odour			8							
			9							
			10							

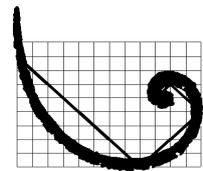
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Jeff Black</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305468</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413469</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

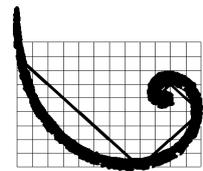
Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Gravel</b> Light brown, dry loose, fine to medium, well sorted, subrounded, no stain or odour (road base)			0		DS	Y		0	BJ_MW02_0.2	
<b>Sandy Clay</b> Orange-brown, dry, medium stiff, non-plastic, no stain, no odour, trace gravel			1					0		
			2					0		
			3					0		
			4					0		
<b>Shale</b> Weathered, red-brown, moist, friable, no stain, no odour			5		US	Y		0	BJ_MW02_4.9	

**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**  
 Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BJ\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Jeff Black</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305468</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413469</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0		
			7					0		
			8					0		
			9					0		
			10					0		

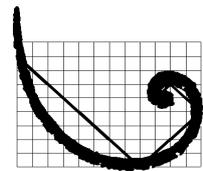
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BJ\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Jeff Black</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305468</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413469</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11					0		
			12					0		
<b>Shale</b> Bedrock, grey, dry, har, no stain no odour			13					0		
			14					0		
			15					0		

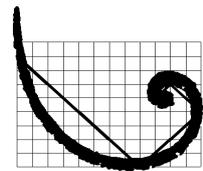
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BJ\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>31/10/2013</b>	Total Depth (m): <b>1.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>8/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305695</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413235</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Clay</b> Orange-brown, dry, medium, stiff, non-plastic, no stains, no odour, trace gravel			0		DS	N		0	BJ_MW03_0.2	
								0		
<b>Sandy Clay</b> Orange-brown, moist soft, low plastic, no odour			1		DS	Y		0	BJ_MW03_1.4	
					US	Y		0	BJ_MW03_1.6	
End of Log			2							
			3							
			4							
			5							

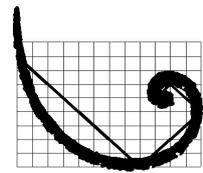
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BJ\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>1/11/2013</b>	Total Depth (m): <b>1.2</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>8/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305846</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413299</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Orange-brown, dry, medium dense, non-plastic, no stains, no odour, fine to coarse, subangular gravel			0		DS	N		0	BJ_MW04_0.2	
			1		US	Y		0	BJ_MW04_1.1	
End of Log			2							
			3							
			4							
			5							

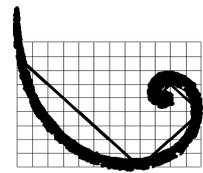
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>31/10/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305644</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413683</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Brown, dry, medium stiff, non-plastic, no stains, no odour, medium sub angular gravel			0		DS	Y		0	BJ_MW05_0.2	
<b>Shale</b> Weathered shale, brown, dry, friable, no stain no odour			0					0		
<b>Shale</b> Grey, dry no stain no odour			2							
			3							
			4							
			5							

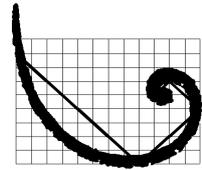
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BJ\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>31/10/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305644</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413683</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

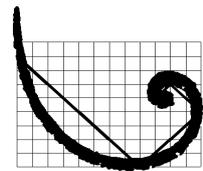
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BJ\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>31/10/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>7/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305644</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413683</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
<b>Shale</b> Brown, soft, clay inclusions, no stain, no odour			12							
<b>Shale</b> Grey, dry, hard, no staining, no odour			13							
			14							
			15							

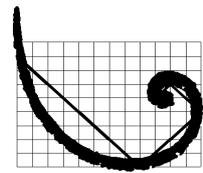
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>0.8</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305309</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413807</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Brown, dry, medium stiff, non-plastic, no stains, no odour, medium sub angular gravel					DS	N		0	BJ_SB01_0.2	
								0		
<b>Shale</b> Weathered shale, brown, dry, friable, no stain no odour  End of Log			1							
			2							
			3							
			4							
			5							

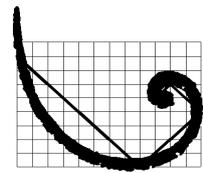
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>1.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305367</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413712</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Brown, dry, friable, non plastic, no stain, no odour			0		DS	N		0	BJ_SB02_0.2	
							0			
			1				0			
<b>Sandy Clay</b> Grey, mottled red, moist, medium stiff, low plastic, no stain, no odour, trace quartz gravel					DS	Y		0	BJ_SB02_1.6	
<b>Shale</b> Weathered Shale, brown, dry, friable, no stain, no odour			2							
End of Log			5							

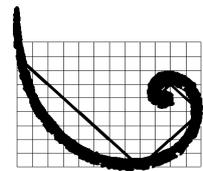
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **5/11/2013** Total Depth (m): **1.8** Final Water Level (m bgl): -  
 Drill Finish Date: **6/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **305317**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413674**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Gravelly Clay</b> Brown, dry, medium stiff, non-plastic, no stains, no odour, trace rootlets			0		DS	N		0	BJ_SB03_0.2		
			0								
			1		US	Y		0	BJ_SB03_1.7		
<b>Shale</b> Weathered shale, red-brown, dry, friable, no stain, no odour  End of Log			2								
			3								
			4								
			5								

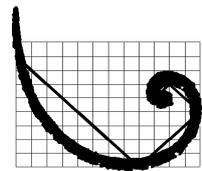
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BJ\_SB04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>0.8</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305415</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413802</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Shale</b> Weathered shale, brown, dry, friable, no stain, no odour, trace rootlets					DS	N		0	BJ_SB04_0.2	
					US	Y		0	BJ_SB04_0.7	
End of Log										

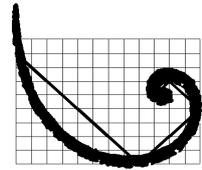
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

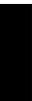
ID: **BJ\_SB05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>0.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305478</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413744</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Shale</b> Weathered Shale, brown, dry, friable, no stain, no odour					DS	N		0	BJ_SB05_0.2	
					US	Y		0	BJ_SB05_0.4	
End of Log			1							
			2							
			3							
			4							
			5							

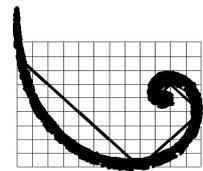
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **31/10/2013** Total Depth (m): **3** Final Water Level (m bgl): -  
 Drill Finish Date: **4/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **305571**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413693**  
 Hole Type: **Soil Bore** Water Strike (m bgl): **1.9**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Grey, dry, stiff, non-plastic, no stain, no odour, medium rounded gravel (road base)			0		DS	N		0	BJ_SB06_0.2	
<b>Clayey Gravel</b> Orange-brown, moist, medium dense, fine to medium gravel, well sorted, sub angular, no stain, no odour			1		DS	Y		0	BJ_SB06_1.4	
<b>Silty Sand</b> Brown, wet, dense, very fine grained, well sorted, no odour or staining			2		US	Y		0.1	BJ_SB06_2.0	
<b>Clay</b> Red, mottled brown, soft, high plasticity, no odour or staining			3		US	Y		0	BJ_SB06_3.0	
End of Log			4							
			5							

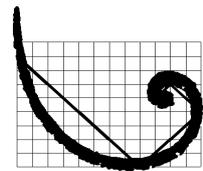
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>31/10/2013</b>	Total Depth (m): <b>1.6</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305598</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413531</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Gravel</b> Grey, dry, medium dense, fine to coarse gravel, well sorted, well rounded, no stains no odour			0		DS	N		0	BJ_SB07_0.2	
<b>Clayey Gravel</b> Red-brown, moist, loose, fine to medium gravel, well sorted, angular, no stain no odour (weathered shale)			1					0		
					DS	Y		0	BJ_SB07_1.4	
					US	Y		0	BJ_SB07_1.6	
End of Log			2							
			3							
			4							
			5							

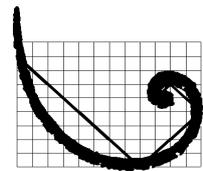
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305532</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413446</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Orange-brown, dry, medium stiff, non-plastic, no stain, no odour, fine to medium sub angular gravel					DS	N		0	BJ_SB08_0.2	
							0			
			1				0			
							0			
<b>Clay</b> Organic matter, black, moist, soft, non-plastic, organic odour					US	Y		0	BJ_SB08_2.7	
			3				0			
End of Log										
			4							
			5							

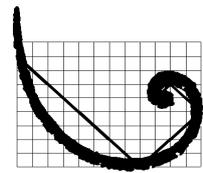
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>0.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305532</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413305</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Shale</b> Weathered Shale, brown, dry friable, no stain, no odour					DS	N		0	BJ_SB09_0.2	
					US	Y		0	BJ_SB09_0.4	
End of Log			1							
			2							
			3							
			4							
			5							

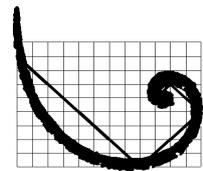
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB10**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>31/10/2013</b>	Total Depth (m): <b>1.05</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305665</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413566</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Grey, dry, medium dense, non-plastic, no stains, no odour, fine to coarse rounded gravel					DS	N		0	BJ_SB10_0.2	
								0		
<b>Shale</b> Weathered Shale, red, brown, dry, friable, no stain, no odour.			1		DS	Y		0	BJ_SB10_1.0	
End of Log										
			2							
			3							
			4							
			5							

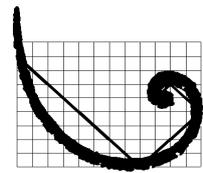
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB11**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>31/10/2013</b>	Total Depth (m): <b>0.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305667</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413439</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Grey, dry, medium, dense, non-plastic, no stain, no odour, rounded and subangular gravel					DS	N		0	BJ_SB11_0.2	
<b>Shale</b> Weathered shale, grey, dry, friable, no stain, no odour										
End of Log			1							
			2							
			3							
			4							
			5							

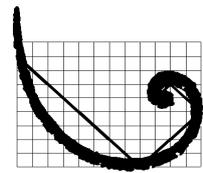
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB12**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/11/2013</b>	Total Depth (m): <b>2.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305648</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413308</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Orange-brown, dry, medium stiff, non-plastic, no stain, no odour, fine to coarse sub angular gravel			0		DS	N		0	BJ_SB12_0.2	
			0					0		
			1					0		
			2		US	N		0	BJ_SB12_2.4	
End of Log			3							
			4							
			5							

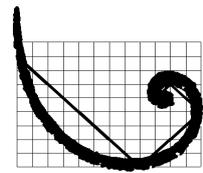
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB13**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **31/10/2013** Total Depth (m): **3** Final Water Level (m bgl): -  
 Drill Finish Date: **4/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **305794**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413568**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Dry, medium stiff, non-plastic, no stains, no odour, medium rounded gravel (road base)			0		DS	N		0	BJ_SB13_0.2	
<b>Gravelly Clay</b> Brown, dry, soft, non-plastic, no stain, no odour, medium subangular gravel (weathered shale)			1					0		
			1		DS	Y		0	BJ_SB13_1.4	
			2					0		
			3		US	Y		0	BJ_SB13_3.0	
End of Log			4							
			5							

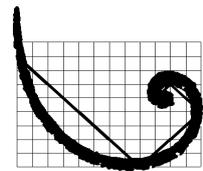
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB14**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305794</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413450</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Orange-brown, dry, medium stiff, non-plastic, no stains, no odour, sub angular gravel			0		DS	N		0	BJ_SB14_0.2	
			0					0		
			1					0		
			2					0		
			3		US	Y		0	BJ_SB14_2.9	
End of Log			4							
			5							

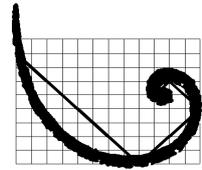
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB15**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/11/2013</b>	Total Depth (m): <b>0.85</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305791</b>
Drill Method: <b>HA/NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413304</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Light brown, dry, medium stiff, non-plastic, no stain, no odour, fine to coarse sub rounded gravel (road base) trace concrete rubble					DS	N		0	BJ_SB15_0.2	
								0		
<b>Shale</b> Weathered Shale, brown dry, friable, no stain, no odour  End of Log			1							
			2							
			3							
			4							
			5							

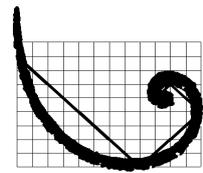
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB16**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>31/10/2013</b>	Total Depth (m): <b>1.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>305909</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413540</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Brown, dry, soft, non-plastic, no stain, no odour, medium subangular gravel, trace building rubble			0		DS	N		0	BJ_SB16_0.2	
<b>Sandy Clay</b> Light grey, moist, non-plastic, no stains, no odour, trace gravel			0.5					0		
<b>Shale</b> Weathered shale boundary			1					0		
<b>Sandy Clay</b> Light grey mottled orange, dry, soft, non-plastic, no stain, no odour			1.6		DS	Y		0	BJ_SB16_1.6	
End of Log			2							
			3							
			4							
			5							

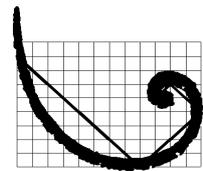
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB17**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **31/10/2013** Total Depth (m): **1.8** Final Water Level (m bgl): -  
 Drill Finish Date: **4/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **305912**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413444**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Clay, brown, dry, soft, non-plastic, no stains, no odour, medium, sub angular gravel, trace rootlets, trace building rubble					DS	N		0	BJ_SB17_0.2	
								0		
<b>Sandy Clay</b> Brown mottled red, moist, medium stiff, low plastic, no stains no odour, trace gravel								0		
					DS	Y		0	BJ_SB17_1.4	
					US	Y		0.1	BJ_SB17_1.8	
End of Log			2							
			3							
			4							
			5							

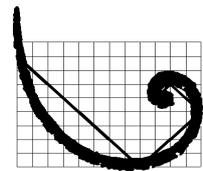
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB18**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **1/11/2013** Total Depth (m): **3.6** Final Water Level (m bgl): -  
 Drill Finish Date: **4/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **305910**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413304**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Clay, orange-brown, dry, medium, stiff, non plastic, no stains, no odour, fine to coarse sub angular gravel			0	■	DS	Y		0	BJ_SB18_0.2	
			1					0		
			1.5	■	DS	Y		0	0	BJ_SB18_1.5
<b>Sandy Clay</b> Orange-brown, moist, soft, non-plastic, no odour, or staining			3	■	US	Y		0	BJ_SB18_3.0	
								0		
End of Log			4							
			5							

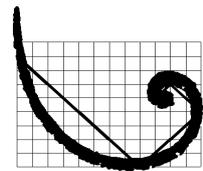
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BJ\_SB19**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **1/11/2013** Total Depth (m): **3.6** Final Water Level (m bgl): -  
 Drill Finish Date: **4/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **305959**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413387**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Orange-brown, dry medium dense, non plastic, no stains no odour, fine to coarse sub angular gravel			0		DS	Y		0	BJ_SB19_0.2	
								0		
<b>Sandy Clay</b> Trace gravel, orange-brown, moist, soft, non-plastic, no odour or staining			1		DS	Y		0	BJ_SB19_1.4	
								0.1		
<b>Silty Sand</b> Grey-brown, wet, medium-dense, very fine grained, well sorted, organic odour			2							
<b>Sand</b> Orange-brown, moist, soft, low plasticity, no odour or staining			3		US	Y		0	BJ_SB19_3.0	
								0		
End of Log			4							
			5							

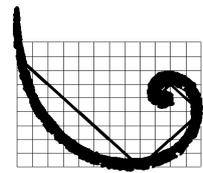
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BK\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306901</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414970</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty gravel, brown, dry, dense, firm, medium to coarse sub-rounded gravel, no staining or odours, occasional cobbles sub-rounded, angular			0		DS	N		0	BK_MW01_0.1	
<b>Fill</b> Clayey gravel, orange-brown, dense/firm, medium to coarse sub-rounded angular gravels, no staining or odour.			1					0		
			2					0		
			3					0		
			4					0		
			5		US	Y		0	BK_MW01_5.0	

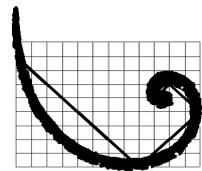
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

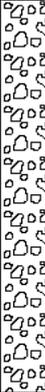
**ID: BK\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306901</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414970</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6						BK_MW01_3.0	
<b>Gravel</b> Fine to coarse, sub-rounded gravels			9							
			10							

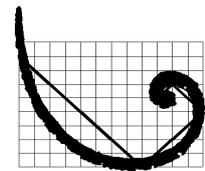
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BK\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306991</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415081</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty Gravel, grey, brown, very dry, fine to coarse sub-rounded to sub-angular gravels and large roots/cobbles			0		DS	N		0	BK_MW02_0.1	
			1					0		
<b>Fill</b> Sandy clay, brown, dry to moist, soft, non-plastic, no stain, no odour, trace gravel			2					0		
			3					0		
<b>Sandy Clay</b> Brown, mottled grey and red, moist, soft, non plastic, no stain no odour			4					0		
			5							

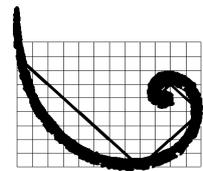
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BK\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306991</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415081</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6		US	Y		0	BK_MW02_5.9	
			7							
			8							
			9							
			10							

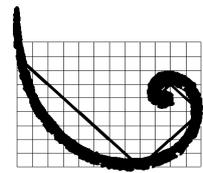
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BK\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307071</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415227</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty gravel, brown, dry, dense, fine to coarse gravels, poorly sorted, sub-angular to sub-rounded, no odours or staining			0		DS	Y		0	BK_MW03_0.1	
<b>Fill</b> Sandy clay, brown, moist, soft, non plastic, no stain no odour, trace gravel			1					0		
<b>Sandy Clay</b> Grey, mottled red and orange, moist, soft, non plastic, no stain, no odour			2					0		
			3					0		
			4					0		
			5							

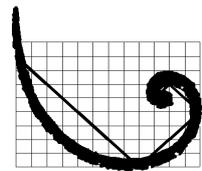
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BK\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307071</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415227</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6		US	Y		0	BK_MW03_5.7	
			7							
			8							
			9							
			10							

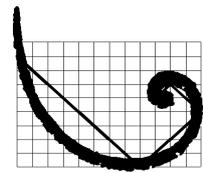
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BK\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>15/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>166.53</b>
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): <b>167.48</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306882.693</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415193.347</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Brown to orange, dry, very dense, low plasticity, no staining			0		DS	Y		0	BK_MW04_0.1	
<b>Shale</b> Weathered, dry, brown, dry, friable, no stain no odour			1		DS	Y		0	BK_MW04_0.9	
<b>Shale</b> Grey, dry, no stain, no odour			2							
			3							
			4							
			5							

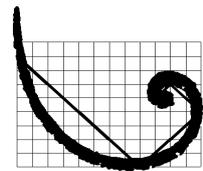
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BK\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>15/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>15/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>166.53</b>
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): <b>167.48</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306882.693</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415193.347</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

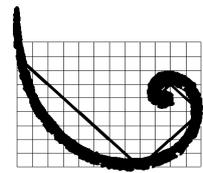
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BK\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>0.6</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306818</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415026</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravelly, clay, shale pieces and river cobbles throughout, moist, stuff, non-plastic, no odour, no staining.					DS	N		0	BK_SB01_0.2	
<b>Shale</b> Siltstone bedrock.										
End of Log			1							
			2							
			3							
			4							
			5							

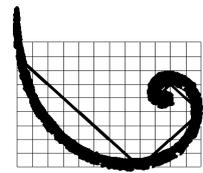
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BK\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>1.2</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306817</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415118</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy clay, brown, dry, stiff, non-plastic, no odour, no staining.			0		DS	N		0	BK_SB02_0.2	
<b>Fill</b> Clayey gravel, shale and river cobbles (conglomerate), moist, brown, dense, medium - coarse grained, poorly sorted, sub-angular cobbles.			0.1					0.1		
			1					0		
End of Log			2							
			3							
			4							
			5							

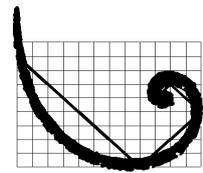
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BK\_SB03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>2.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306901</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415063</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clayey gravel, cobbles and shale fragments, brown, moist, medium density, medium - coarse grained, sub-angular gravel, poorly sorted, no odour, no staining.			0	■	DS	N		0	BK_SB03_0.2	
								0		
			1					0		
<b>Sandy Clay</b> Red - brown, moist, medium - stiff, low plasticity, no odour, no staining.				■	US	N		0.1	BK_SB03_1.6	
			2					1		
<b>Shale</b> Weathered bedrock, minor quartz gravel, pale grey with orange/brown mottling, very dense.								0.4		
			3							
End of Log			4							
			5							

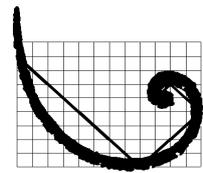
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BK\_SB04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>1</b>	Final Water Level (m bgl): <b>-</b>
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): <b>-</b>
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): <b>-</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306906</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415133</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy clay, red-brown, dry, stiff, non-plastic, no odour, no staining.					DS	N		0	BK_SB04_0.2	
<b>Sandstone</b> Weathered								0.2		
<b>Sandstone</b> Grey with red mottling, dry, hard.			1							
End of Log										
			2							
			3							
			4							
			5							

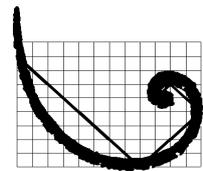
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BK\_SB05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>2</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306969</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415141</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clayey sand, traces of gravel, brown, dry, medium density, fine grained, poorly sorted, no odour, no staining.			0.1		DS	N		0.1	BK_SB05_0.2	
<b>Fill</b> Clayey gravel, brown, dry, dense, fine - coarse (150 mm boulders max), sub-angular, poorly sorted, no odour, no staining.			0.5					0.5		
<b>Sandy Clay</b> Orange/brown, moist, medium - stiff, non-plastic, no odour, no staining.			1					0.5		
<b>Sandstone</b> Extremely weathered bedrock, orange/brown, slightly moist, medium density			0.6					0.6		
<b>Sandstone</b> Weathered bedrock, orange with grey mottling, , slightly moist, coarse angular gravels.			2		US	N		0.5	BK_SB05_2.0	
End of Log										
			3							
			4							
			5							

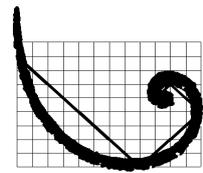
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BK\_SB06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>0.8</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306947</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415286</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Silt</b> Brown/orange, very dry, very dense, no staining, no sheen.					DS	N		0	BK_SB06_0.1	
<b>Sandstone</b> Bedrock, orange-brown-white, very dense.					DS	N		0.1	BK_SB06_0.6	
End of Log			1							
			2							
			3							
			4							
			5							

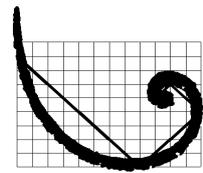
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BK\_SB07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>14/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306973</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6415218</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> White/orange clays with fine - coarse gravels, dry at surface, slightly moist with depth, no odour, no staining.			0		DS	N		0	BK_SB07_0.1	
			1					0		
			2					0.1		
<b>Sandstone</b> Highly weathered, bedrock, orange/white/pale grey, dense, no odour, no staining.			2							
<b>Sandstone</b> Gravel layers, orange/brown, grey mottling, slightly moist, increasing density with depth.			3		US	N		0.1	BK_SB07_2.9	
End of Log			4							
			5							

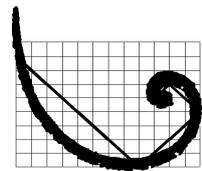
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **14/11/2013** Total Depth (m): **6** Final Water Level (m bgl): **1.58**  
 Drill Finish Date: **21/11/2013** Hole Diam. / Width (mm): **125** Elevation (Ground): **180.32**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **180.16**  
 Driller: **Wade Manger** Casing Diam. (mm): **50** Easting (MGA): **307221.962**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Gatic** Northing (MGA): **6413683.808**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **4**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, dark brown, dry, loose, fine to medium grained, moderately sorted, no odour, no staining, rootlets throughout  <b>Fill</b> Clayey gravel, moist, medium dense, fine to coarse, subangular, poorly sorted, no odour or staining. Weathered shale fragments throughout			0					0.1		
			0.2					0.2		
			1					0.1		
					DS	N		0.1	BL_MW01_1.5	
<b>Gravelly Clay</b> Grey mottled orange, dry, stiff, non-plastic, no odour or staining, highly weathered shale			2					0.1		
			3		US	Y		0.1	BL_MW01_3.0	
			4					0.2		
			5					0.2		

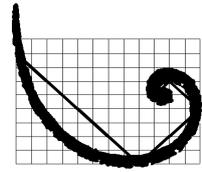
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>1.58</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.32</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.16</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307221.962</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413683.808</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0.1		
End of Log			7							
			8							
			9							
			10							

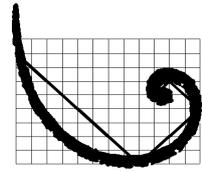
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl):
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.04</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.96</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307144.823</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413715.671</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	N		0.2	BL_MW02_0.2	
<b>Fill</b> Sand, grey, moist, dense, medium to coarse, poorly sorted, no odour or staining. Stabilised sand road base			0							
<b>Fill</b> Gravelly clay, orange-brown, moist, soft, low plasticity, no odour or staining, sub angular shale and ironstone fragments throughout			1							
			2					0		
			3					0		
<b>Shale</b> Weathered, grey, moist, no stain, no odour			4							
<b>Siltstone</b> Grey, dry, no stain, no odour, fine grained.			5							

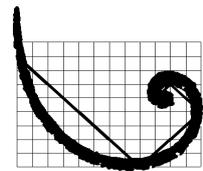
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BL\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl):
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.04</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.96</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307144.823</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413715.671</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

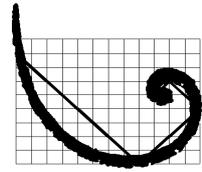
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>4</b>	Final Water Level (m bgl): <b>1.99</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.04</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.95</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307099.829</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413800.011</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	N		0	BL_MW03_0.25	
<b>Fill</b> Gravelly clay, grey-brown mottled orange, moist, soft, non-plastic, no odour or staining			0 to 3.4					0		
<b>Shale</b> Weathered, grey, moist, no stain, no odour			3.4 to 4		US	Y		0	BL_MW03_3.4	
End of Log			4 to 5							

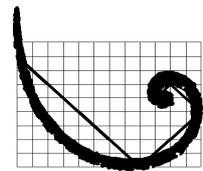
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **25/11/2013** Total Depth (m): **3.5** Final Water Level (m bgl): **1.68**  
 Drill Finish Date: **4/12/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): **180.04**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **179.95**  
 Driller: **Eric Grima** Casing Diam. (mm): **50** Easting (MGA): **307121.004**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Gatic** Northing (MGA): **6413733.123**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **1.8**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining								0.2	BL_MW04_0.25	
<b>Fill</b> Gravelly Clay, orange-brown, moist, medium-stiff, non-plastic, no odour or staining, sub angular shale pieces throughout					DS	N		0.3		
			1					0.2		
<b>Fill</b> Siltstone, dry grey, dry, laminated					DS	N		0.2 0.9	BL_MW04_1.55	
<b>Fill</b> Gravelly clay, brown with red mottling, moist, some plasticity, no odour, no staining, becoming dry with depth and occasional shale inclusions			2					1.7		
					US	N		1.6	BL_MW04_2.5	
<b>Siltstone</b> Completely weathered and soft			3							
<b>Shale</b> Dark grey, dry, hard, competent										
End of Log			4							
			5							

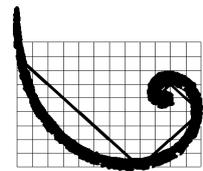
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>7</b>	Final Water Level (m bgl): <b>4.23</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.31</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.24</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306797.432</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413877.233</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, grey-brown, moist, loose, fine grained, well sorted, no odour or staining, rootlets throughout  <b>Fill</b> Gravelly clay, orange-brown, moist, medium stiff, non-plastic, no odour or staining. Concrete block at 0.5 m bgl			0		DS	N		0	BL_MW05_0.1	
			1					0		
			1					0.1		
			2					0.1		
			2					0		
			3					0		
<b>Clay</b> Organic material, dark grey, moist, soft, low plasticity, organic odour			3					0		
			3		US	Y		0	BL_MW05_3.4	
<b>Shale</b> Weathered, red-brown, dry, friable, no staining, no odour			4							
			4							
<b>Shale</b> Grey, dry, no odour			5							
			5							

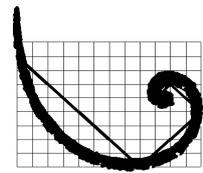
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>7</b>	Final Water Level (m bgl): <b>4.23</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.31</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.24</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306797.432</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413877.233</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
End of Log			8							
			9							
			10							

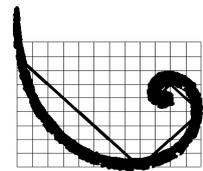
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>4.3</b>	Final Water Level (m bgl): <b>3.57</b>
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.99</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.91</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306895.563</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413830.407</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0							
<b>Fill</b> Gravelly clay, orange-brown, moist, soft, non-plastic, no odour, no staining, weathered shale fragments throughout			0.1		DS	N		0.1	BL_MW06_0.25	
			0.2					0.2		
			1					0.2		
			2					0.1		
			3					0		
<b>Shale</b> Weathered, grey, moist, no stain, no odour			3		US	Y		0	BL_MW06_3.0	
			4							
End of Log			5							

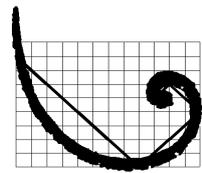
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307088</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413743</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining					DS	N		0.2	BL_SB01_0.25	
<b>Fill</b> Gravelly sand, grey-brown, moist, medium dense, fine to coarse, poorly sorted, no odour or staining.								0.2		
<b>Gravelly Clay</b> Orange-brown, moist, soft, low plasticity, no odour or staining, completely weathered shale			1							
			2					0		
			3		US	Y		0	BL_SB01_2.9	
<b>Shale</b> Weathered shale, grey, moist, no stain, no odour										
End of Log			4							
			5							

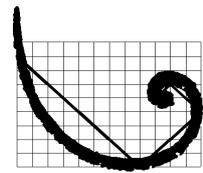
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **25/11/2013** Total Depth (m): **2.9** Final Water Level (m bgl): -  
 Drill Finish Date: **27/11/2013** Hole Diam. / Width (mm): **85** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **307175**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413758**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining								0.2		
<b>Fill</b> Gravelly clay, grey-brown, moist, medium-stiff, non-plastic, no odour or staining, shale and sandstone fragments throughout.					DS	N		0.2	BL_SB02_0.5	
<b>Fill</b> Gravelly clay, light brown with orange, red and grey mottling, moist, plastic, no staining			1					0.2		
					US	N		0.1		
			1.9					1.9	BL_SB02_1.75	
			2							
					US	Y		0.7	BL_SB02_2.7	
End of Log			3							
			4							
			5							

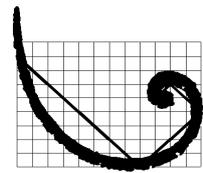
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_SB03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **14/11/2013** Total Depth (m): **3.5** Final Water Level (m bgl): -  
 Drill Finish Date: **14/11/2013** Hole Diam. / Width (mm): **100** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Wade Manger** Casing Diam. (mm): **N/A** Easting (MGA): **307260**  
 Drill Method: **NDD** Surface Completion: **Backfilled** Northing (MGA): **6413745**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, dark brown, dry, loose, fine to medium grained, moderately sorted, no odour or staining. Rootlets throughout			0		DS	N		0	BL_SB03_0.1	
<b>Fill</b> Gravelly clay, brown, moist, soft, low plasticity, no odour or staining			0.1					0.1		
<b>Fill</b> Gravelly clay, orange-brown, mottled grey, moist, soft, non-plastic, no odour, no staining. Weathered shale fragments throughout			1					0.2		
<b>Clay</b> Fully weathered shale, grey with brown mottling, moist, ironstone gravels throughout (including red mottling), no odour			2		US	Y		0.1	BL_SB03_2.0	
<b>Clay</b> Becoming light grey with red mottling. Mica crystals			3		US	Y		0.1	BL_SB03_3.0	
End of Log			4					0.1		
			5							

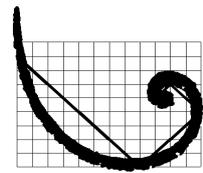
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_SB04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306818</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413919</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, grass, brown, moist, loose, fine grained, well sorted, no odour or staining, rootlets throughout			0		DS	N		0.1	BL_SB04_0.5	
<b>Fill</b> Gravelly clay, grey, mottled red-brown, moist, non-plastic, no odour or staining. Weathered shale throughout								0.1		
								0.1		
								0.1		
			2					0		
			3		US	Y		0	BL_SB04_2.9	
End of Log			4							
			5							

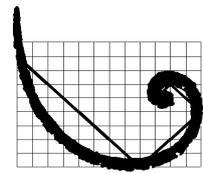
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_SB05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306920</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413884</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0					0		
<b>Fill</b> Sand with trace gravel, grey, moist, dense, coarse grained, poorly sorted, no odour, no staining. Gravel roadbase			0.1		DS	N		0.1	BL_SB05_0.5	
<b>Fill</b> Gravelly clay, orange-brown, moist, soft, low plasticity, no odour or staining, weathered shale pieces throughout.			1					0.1		
			2					0		
			3		US	Y		0	BL_SB05_2.9	
End of Log			4							
			5							

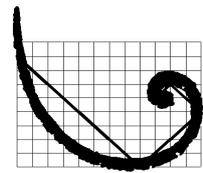
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_SB06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **25/11/2013** Total Depth (m): **3** Final Water Level (m bgl): -  
 Drill Finish Date: **26/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **306965**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413814**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy silt, dark brown, moist, fine grained, moderately sorted, no odour or staining			0					0.1		
<b>Fill</b> Gravelly clay, grey-brown, moist, soft, low-plasticity			0.2		DS	N		0.2	BL_SB06_0.5	
			1					0.2		
			1					0.1		
			2					0		
<b>Shale</b> Weathered, grey, moist, no stain, no odour			3		US	Y		0	BL_SB06_2.9	
<b>clay</b> Brown, moist, soft, medium plasticity, no odour or staining.			3							
End of Log			4							
			5							

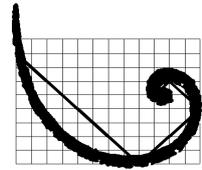
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BL\_SB07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **25/11/2013** Total Depth (m): **3** Final Water Level (m bgl): -  
 Drill Finish Date: **25/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **307165**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413763**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	N		0.2	BL_SB07_0.25	
<b>Fill</b> Gravelly clay, orange-brown, moist, medium stiff, non-plastic, no odour or staining, shale and ironstone pieces throughout			1					0.2		
			2					0		
<b>Shale</b> Weathered shale, brown, moist, soft, no stain, no odour			3		US	Y		0	BL_SB07_2.9	
End of Log			4							
			5							

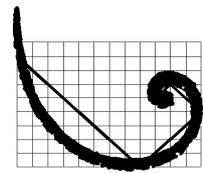
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>0.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Sand</b> With some silt, brown, medium dense, fine sand to cobbles, moderately sorted, homogeneous, no odour, no staining					DS	N		0.3	BM_MW01_0.2	
<b>Siltstone</b> Extremely weathered, dark grey, dry, no odour, no staining Refusal on siltstone bedrock, consolidated but able to be crushed by hand to silt										
End of Log			1							
			2							
			3							
			4							
			5							

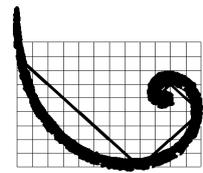
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>1.1</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Brown, soft, moderate plasticity, homogeneous, grass roots included, no odour, no staining, weathered siltstone gravel inclusions, grey and minor red brown mottle, moist					DS	N		0.3		
								0.3	BM_MW02_0.5	
<b>Silty Clay</b> Red brown, moist, soft, low plasticity, homogeneous, no odour, no staining, inclusions of plastic, foam, timber, gravels, concrete and sand, refusal due to rubble			1		DS	Y		0.2	BM_MW02_1.0	
End of Log			2							
			3							
			4							
			5							

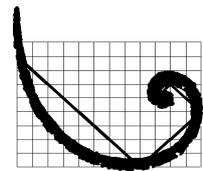
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>3.1</b>	Final Water Level (m bgl): <b>0.78</b>
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA):
Drill Method: <b>NDD/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA):
Hole Type:	Water Strike (m bgl): <b>1</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Brown, moist, soft, medium plasticity, homogeneous, inclusions of grass roots throughout, no odour, no staining			0		DS	N		0.1	BM_MW03_0.2	
<b>Clay</b> Orange brown, moist, soft, high plasticity, homogeneous, no odour, no staining			1					0.1		
<b>Sandy Clay</b> Sandy clay with gravel, orange brown with minor grey mottle, moist, medium stiff, medium plasticity, homogeneous, inclusions of weathered siltstone gravels, no odour, no staining			3					0.1		
End of Log			4							
			5							

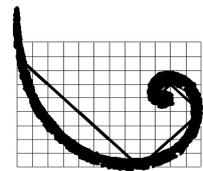
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Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Brown to orange, very stiff, high plasticity, no odour, no staining			0		DS	N		0.5		
								1.5	BM_MW04_0.5	
<b>Gravelly Clay</b> Weathered bedrock, orange brown, high plasticity, no odour, no staining			1					0.6		
<b>Gravelly Sand</b> With some clay, brown, slightly moist, dense, fine sand to coarse gravel, moderately sorted, homogeneous, no odour, no staining			2					0.1		
			3							
			4							
			5							

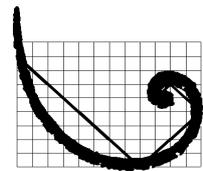
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: AM/GP/TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
<b>Shale</b> Weathered, brown, dry, no odour, no staining.			7							
			8							
			9							
End of Log			10							

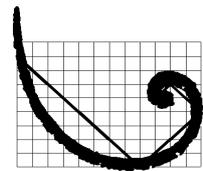
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Log By: **AM/GP/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>3.3</b>	Final Water Level (m bgl): <b>1.32</b>
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA):
Drill Method: <b>NDD/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA):
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.4</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Red brown, moist, medium stiff, low plasticity, homogeneous, grass roots included, no odour, no staining  <b>Clay</b> Brown, moist, medium stiff, high plasticity, homogeneous, no odour, no staining, minor tree rootlets included, minor grey mottle from 0.75mbgl, red brown from 0.9mbgl			0		DS	N		0.2	BM_MW05_0.2	
			0.2							
<b>Sandy Clay</b> Sandy clay with gravel, light brown with red brown mottle, moist, medium stiff, low plasticity, homogeneous, weathered siltstone gravel inclusions, no odour, no staining			1					0.1		
			1.5		DS	N		0.1	BM_MW05_1.5	
End of Log			4							
			5							

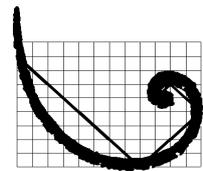
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>1.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty Clay, brown, soft, high plasticity, no odour					DS	N			BM_MW06_0.1	
<b>Fill</b> Gravelly Clay, dense, moderate plasticity, no odour or staining. Large cobbles throughout. Steel, plastic and unconsolidated landfill material from 0.6m bgl.			1							
End of Log			2							
			3							
			4							
			5							

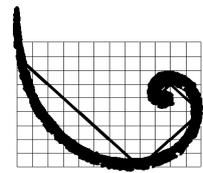
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BM\_SB08/BM\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>5.395</b>
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA):
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA):
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clay gravel, orange brown, dry, medium dense, fill from adjacent road								0.9		
					DS			1.2	BM_SB08_0.5	
<b>Sandy Clay</b> Sandy clay with gravel, light brown, slightly moist, stiff, non-plastic, heterogeneous with fine sand to coarse gravel, poorly sorted, no odour, no staining			1					1.8		
								0.2		
<b>Silty Clay</b> Silty clay with gravel, brown at 3.0 to 3.2mbgl, red with grey mottle at 3.2 to 3.4mbgl, low plasticity, stiff, weathered siltstone gravel inclusions, moist, no odour, no sheen			2					0.2		
								0.2		
<b>Silty Clay</b> Silty clay with gravel, brown at 3.0 to 3.2mbgl, red with grey mottle at 3.2 to 3.4mbgl, low plasticity, stiff, weathered siltstone gravel inclusions, moist, no odour, no sheen			3		US			0.2	BM_SB08_3.0	
								0.2		
<b>Silty Clay</b> Silty clay with gravel, brown at 3.0 to 3.2mbgl, red with grey mottle at 3.2 to 3.4mbgl, low plasticity, stiff, weathered siltstone gravel inclusions, moist, no odour, no sheen			4					0.2		
					US			0.2	BM_SB08_4.6	
			5							

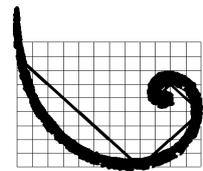
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BM\_SB08/BM\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **4/12/2013**  
 Drill Finish Date: **6/12/2013**  
 Drill Co: **Numac**  
 Driller: **Justin Collier**  
 Drill Method: **NDD/PT/SFA**  
 Hole Type: **Monitoring Well**

Total Depth (m): **6**  
 Hole Diam. / Width (mm): **150**  
 Casing Type: **PVC**  
 Casing Diam. (mm): **50**  
 Surface Completion: **Monument**  
 Water Strike (m bgl): **4.5**

Final Water Level (m bgl): **5.395**  
 Elevation (Ground): -  
 Elevation (Case): -  
 Easting (MGA):  
 Northing (MGA):

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
End of Log			7							
			8							
			9							
			10							

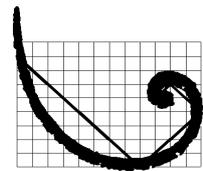
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Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BM\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>2.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty gravel, brown, dense, steel valve from pipe (unattached), aluminium conduit at 0.4mbgl					DS	N		0.1 0.8	BM_SB01_0.5	
<b>Shale</b> Weathered, orange grey, dense, no staining, no odour			1					0.2		
<b>Silty Clay</b> Silty clay with gravel, light brown at 1.5 to 1.7mbgl, red brown at 1.7 to 2.2mbgl, moist, medium stiff, low plasticity, homogeneous, no odour, no staining					DS	N		0.1	BM_SB01_1.5	
<b>Coal</b> Black, moist, extremely weathered										
<b>Sand</b> Red brown, moist, dense, fine, well sorted, no odour, no staining					US	Y		0.1	BM_SB01_2.5	
End of Log			3							
			4							
			5							

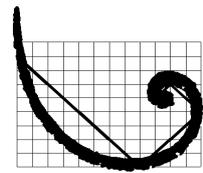
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Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_SB01 (2)**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>6/12/2013</b>	Total Depth (m): <b>0.8</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306504</b>
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413165</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravelly Sand with clay, brown, medium dense, fine to coarse, moderately sorted, heterogenous with inclusions of glass, plastic, concrete and foam. No odour or staining			0.2					0.2		
			0.1					0.1		
<b>Fill</b> with clay, brown, medium dense, fine to coarse, moderately sorted, heterogenous with inclusions of glass, plastic, concrete and foam. No odour or staining			0.8		DS	Y		0.1	BM_SB01 (2)_0.8	
End of Log			1							
			2							
			3							
			4							
			5							

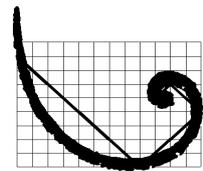
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>0.9</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Brown, firm, medium plasticity, no odour, no staining, tree roots					DS	N			BM_SB02_0.5	
<b>Shale</b> Bedrock, slightly weathered, brown, dry, hard, no odour, no staining								0.1		
End of Log			1							
			2							
			3							
			4							
			5							

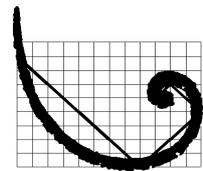
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Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BM\_SB03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>1.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Red brown, moist, medium plasticity, no odour, no staining			0		DS	N		0.5		
								0.6	BM_SB03_0.5	
<b>Silty Clay</b> Orange brown with grey mottle, minor red mottle at 1.65 to 1.7mbgl, moist, friable, homogeneous, no odour, no staining			1					0.5		
								0.1		
End of Log			2					0.1		
			3							
			4							
			5							

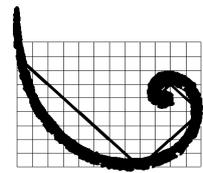
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Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_SB04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>1.3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Shale</b> Weathered, grey brown, moderate dense to very dense, slightly moist, grey seams from 1.0mbgl, colour change to brown at 1.3mbgl					DS	N		0.5	BM_SB04_0.5	
								1		
								1		
End of Log			0.1							
			2							
			3							
			4							
			5							

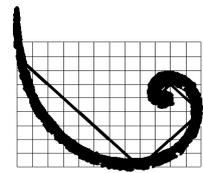
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Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_SB05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>1.8</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Orange brown mottled grey, moist, medium plasticity, no odour, no staining					DS	N		0.4 0.8	BM_SB05_0.5	
<b>Shale</b> Weathered, grey brown, dense, no odour, no staining			1					0.6 0.1		
End of Log			2 3 4 5					0.1		

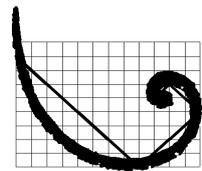
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BM\_SB06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>1.8</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Brown, firm, high plasticity, no odour, no staining			0		DS	N		0	BM_SB06_0.1	
<b>Shale</b> Weathered shale			1							
<b>Gravelly Sandy Clay</b> Brown with grey mottle, slightly moist, friable, homogeneous, no odour, no staining			0.2					0.2		
End of Log			0.2					0.2		
			2							
			3							
			4							
			5							

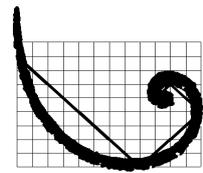
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BM\_SB07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>1.7</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Brown, high plasticity, stiff, no odour, no staining					DS	N		1	BM_SB07_0.5	
								1.5		
<b>Shale</b> Highly weathered bedrock/shale, dense, brown, low plasticity			1					1.2		
<b>Shale</b> Weathered, grey brown, very dense, low plasticity										
<b>Shale</b> Extremely weathered, grey brown, no odour, no staining								0.1		
End of Log			2							
			3							
			4							
			5							

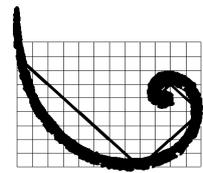
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BM\_SB09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>4/12/2013</b>	Total Depth (m): <b>3.1</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Justin Collier</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA):
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA):
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clay</b> Brown, high plasticity, stiff, no odour, no staining					DS	N		0.8	BM_SB09_0.5	
<b>Shale</b> Weathered, orange brown, stiff, no odour, no staining			1					0.5		
<b>Shale</b> Extremely weathered, orange brown with grey mottle from 1.5 to 2.2 m bgl, brown with grey brown mottle from 2.2mbgl, moist, friable, homogeneous, no odour, no staining			2					0.2		
								0.2		
								0.2		
			3					0.2		
End of Log			4							
			5							

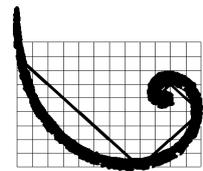
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Log By: **AM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BN\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306966</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6412289</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Topsoil</b> Grass			0		DS	N		0	BN_MW01_0.2	
<b>Fill</b> Silty sand with gravel, light brown, dry, very loose, moderately sorted, no odour, no staining			0					0		
<b>Clayey Gravel</b> Brown, medium dense, fine gravel with pebbles, poorly sorted, surrounded, no odour, no staining			1							
<b>Siltstone</b> Bedrock, grey, dry, fine grained, no odour, no staining. Bore dry after 24 hours, well reinstated			2		DS	Y		0	BN_MW01_2MBGS	
			3							
			4							
			5							

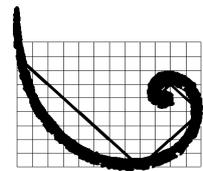
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Log By: **TA/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BN\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306966</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6412289</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10		DS	Y		0	BN_MW01_10MBGS	

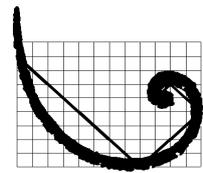
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Log By: **TA/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BN\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>9.9</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>192.54</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>-</b>
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306994.062</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6412287.34</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Sand</b> With some silt, grey, dry, very loose, medium coarse, moderately sorted, sub rounded, no odour, no staining			0		DS	N		0	BN_MW02_0.2	
<b>Clayey Gravel</b> Brown, moist, loose, coarse, moderately sorted, sub rounded, no odour, no staining			1							
<b>Siltstone</b> Grey, dry, fine grained, no odour, no staining			2		DS	Y		0	BN_MW02_2MBGS	
			3							
			4							
			5							

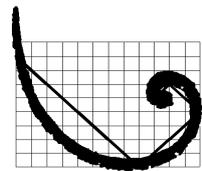
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TA/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BN\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>9.9</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>192.54</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>-</b>
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306994.062</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6412287.34</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10		DS	Y		0	BN_MW02_10MBGS	

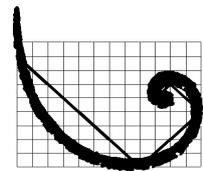
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Log By: **TA/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BN\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2016</b>	Total Depth (m): <b>10.2</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>195.94</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306952.146</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412310.659</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Topsoil, silty sand with trace gravel, brown, dry, very loose, moderately sorted, no odour, no staining			0		DS	N		0	BN_MW03_0.2	
<b>Siltstone</b> Grey, dry, fine grained, no odour, no staining, hydrocarbon like odour from 7.5mbgl			1					0		
			2							
			3							
			4							
			5							

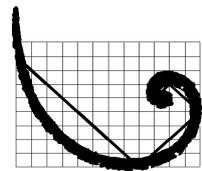
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: SM/TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BN\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2016</b>	Total Depth (m): <b>10.2</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>195.94</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306952.146</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412310.659</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

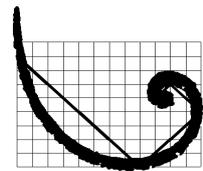
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BO\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>28/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>9.6</b>
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.62</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.28</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306661.359</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412009.752</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Red-brown, moist, soft, non-plastic			0		DS	N			BO_MW01_0.1	
<b>Siltstone</b> Red-brown with light brown mottling, dry, hard, some laminations, no odour, no staining			1		DS				BO_MW01_1.1	
<b>Siltstone</b> Becoming harder with depth			2							
<b>Sandstone</b> Brown, dry, fine to medium grain, no stain, no odour			3							
			4							
<b>Siltstone</b> Grey, dry, fine grained, no stain, no odour.			5							

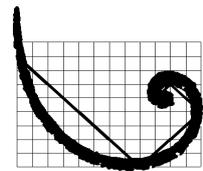
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/HC/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BO\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>28/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>9.6</b>
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.62</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.28</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306661.359</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412009.752</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			0							
			6							
			7							
			8							
			9							
			10							

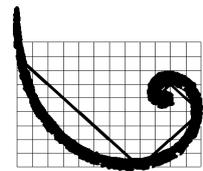
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Log By: **SM/HC/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BO\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>2/12/2013</b>	Total Depth (m): <b>3.9</b>	Final Water Level (m bgl): <b>0.76</b>
Drill Finish Date: <b>2/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>158.32</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>159.09</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306145.427</b>
Drill Method: <b>HA/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411734.363</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Brown, moist, soft, high plasticity, no evidence of impact			0		DS	Y		0.1	BO_MW02_0.2	
<b>Silty Clay</b> Becoming medium stiff			0.1					0.1		
<b>Silty Clay</b> Weathered siltstone gravels, orange-brown			0.2					0.1		
<b>Silty Clay</b> Orange-brown with grey mottling			0.4		DS	N		0.4	BO_MW02_1.5	
<b>Silty Clay</b> Orange-brown with grey mottling			0.7					0.3		
<b>Silty Clay</b> Quartz like gravels			1.0					0.2		
<b>Silty Clay</b> Quartz like gravels			3.0					0.2		
End of Log			4					0.2		
			5							

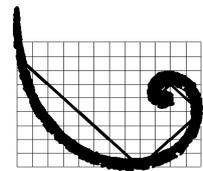
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Log By: **GP/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BO\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>28/11/2013</b>	Total Depth (m): <b>4</b>	Final Water Level (m bgl): <b>0.77</b>
Drill Finish Date: <b>2/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>153.93</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>154.71</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306138.731</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411591.753</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>2.8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Orange-brown, mottled orange and grey, moist, very soft, moderate plasticity, no odour or staining.			0		DS	Y		0.1	BO_MW03_0.2	
			0					0		
			1					0		
<b>Silty Clay</b> Red-brown			2					0.2		
			0.4					0.2		
			3		US	N		0.2	BO_MW03_2.8	
<b>Silty Sandy Clay</b> Light brown mottling, saturated, very soft, plastic, no odour, no staining, fine grained sand			4					0.1		
			4					0.1		
End of Log			5							

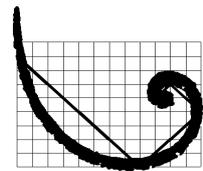
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BO\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **28/11/2013** Total Depth (m): **3.9** Final Water Level (m bgl): **1.1**  
 Drill Finish Date: **2/12/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): **155.58**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **156.28**  
 Driller: **Wade Manger** Casing Diam. (mm): **50** Easting (MGA): **306369.213**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Monument** Northing (MGA): **6411605.234**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **-**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Silty clay</b> Red-brown, moist, soft, medium plasticity, no odour, no staining			0					0			
			0.3	DS	N			0.3	BO_MW04_0.5		
			1						0.1		
			2	US	N			0	0	BO_MW04_1.75	
			2	US	N			0.1	0.1	BO_MW04_2.0	
<b>Silty clay</b> Grey mottling and weathered siltstone gravels			3					0.1			
			4					0.3			
End of Log			4								
			5								

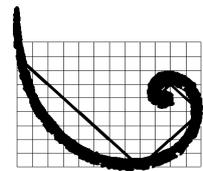
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Log By: **SM/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BO\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>2/12/2013</b>	Total Depth (m): <b>4.5</b>	Final Water Level (m bgl): <b>1.1</b>
Drill Finish Date: <b>3/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>159.87</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>160.69</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306611.934</b>
Drill Method: <b>HA/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411591.959</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>2.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Silty clay</b> Brown with light brown mottling, moist, soft, plastic, no odour no staining, becoming brown with red-brown mottling from 0.5. becoming brown from 1.2			0		DS	N			BO_MW05_0.15		
			1.5								
			0.7								
<b>Sandy Clay</b> With gravel, brown with red-brown and orange-brown mottling (some grey beyond 3m), moist, saturated beyond 2.5 m, soft, plastic, no odour, no staining, gravels are weathered siltstone			1		US	N			BO_MW05_1.8		
			2								
			0.2								
			2.5		US	N			BO_MW05_2.5		
			0.2								
End of Log			5								

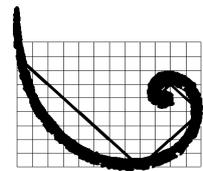
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Log By: **HC/GP**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BP\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>4</b>	Final Water Level (m bgl): <b>0.955</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>169.08</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307345.663</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414242.722</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	N		0	BP_MW01_0.25	
<b>Fill</b> Gravelly sand (road base), red brown, moist, loose, fine to coarse, poorly sorted, no odour, no staining			0					0		
<b>Gravelly Clay</b> Grey brown mottled orange, moist, medium stiff, non-plastic, no odour, no staining, weathered shale fragments throughout, wet from 1.3mbgl			1					0		
			2					0		
<b>Clay</b> Clay with organic matter, dark brown, moist, soft, medium plastic, organic odour, no staining			3					0		
<b>Sandy Clay</b> Grey mottled orange, moist, soft, low plasticity, no odour, no staining			4		US	Y		0	BP_MW01_3.5	
End of Log			5							

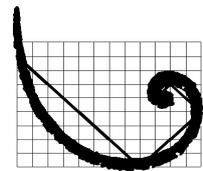
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BP\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>8.2</b>	Final Water Level (m bgl): <b>1.03</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>169.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.22</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307346.595</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414260.778</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy silt, black, dry, loose, very fine grained, well sorted, no odour, no staining			0		DS	Y		1.1	BP_MW02_0.2	
<b>Fill</b> Clayey gravel with some sand, pale brown, moist, medium stiff, no odour, no staining			0.3					0.3		
			1					0.2		
			2					0		
			3					0		
<b>Clay</b> Clay with organic material, black, moist, soft, non-plastic, organic odour			4					0		
<b>Clay</b> Grey, moist, soft, highly plastic, no odour, no staining										
<b>Sandy Clay</b> Grey mottled red and orange, moist, soft, non plastic, no odour, no staining			5							

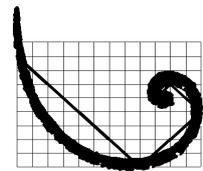
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BP\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>8.2</b>	Final Water Level (m bgl): <b>1.03</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>169.3</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.22</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307346.595</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414260.778</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
								0		
			6		US	Y		0	BP_MW02_6.0	
<b>Shale</b> Weathered, red brown, moist, soft, no odour, no staining			7							
			8							
End of Log			9							
			10							

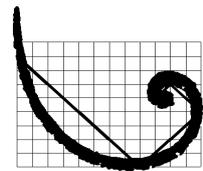
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BP\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>4</b>	Final Water Level (m bgl): <b>2.45</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>169.18</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.08</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307332.78</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414248.155</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0					0		
<b>Fill</b> Gravelly sand (road base), red brown, moist, loose, fine to coarse, poorly sorted, no odour, no staining			0.5		DS	N		0	BP_MW03_0.5	
<b>Fill</b> Gravelly clay, grey mottled orange, moist, medium stiff, low plasticity, no odour, no staining			1					0		
<b>Clay</b> Clay with organic matter, dark brown, moist, soft, medium plastic, organic odour, no staining			2					0		
<b>Clay</b> Brown, moist, soft, highly plastic, no odour, no staining			2.5					0		
<b>Sandy Clay</b> Grey mottled red and orange, moist, soft, low plasticity, no odour, no staining			3					0		
			3.5		US	Y		0	BP_MW03_3.5	
End of Log			4							
			5							

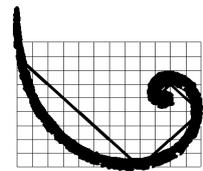
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BP\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **14/11/2013** Total Depth (m): **8** Final Water Level (m bgl): **1.03**  
 Drill Finish Date: **20/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): **169.26**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **169.91**  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **50** Easting (MGA): **307321.5593**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Monument** Northing (MGA): **6414304.8229**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **6**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy silt, black, dry, loose, fine grained, well sorted, no odour, no staining, coal dust and rootlets throughout			0					0.2		
<b>Fill</b> Sandy clay, orange brown, moist, soft, low plasticity, no odour, no staining			0		DS	Y		0.1	BP_MW04_0.5	
<b>Gravelly Clay</b> Brown mottled red, moist, soft, non-plastic, no odour, no staining, ironstone fragments throughout, wet from 2.6mbgl			1							
			2					0		
			3					0		
<b>Shale</b> Grey, dry, friable, no odour, no staining			4					0		
<b>Shale</b> Weathered, dark grey, moist, soft, organic odour, no staining			4							
<b>Clay</b> Dark grey mottled brown, moist, soft, low plasticity, organic odour, no staining, red brown and wet with			5		US	Y			BP_MW04_5.0	

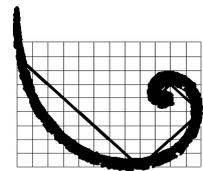
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BP\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>8</b>	Final Water Level (m bgl): <b>1.03</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>169.26</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.91</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307321.5593</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414304.8229</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0	BP_MW04_3.0	
			7					0		
End of Log			8					0		
			9					0		
			10							

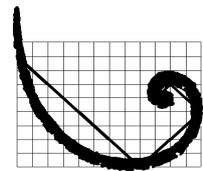
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BP\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>7</b>	Final Water Level (m bgl): <b>1.945</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>169</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.67</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307346.7488</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414293.3283</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy silt, black, moist, loose, very fine grained, well sorted, no odour, no staining, coal dust and rootlets throughout			0		DS	Y		0.2	BP_MW05_0.1	
<b>Fill</b> Sandy gravel, grey, moist, dense, fine to coarse grained, poorly sorted, no odour, no staining, concrete piece at 0.4mbgl			0.3					0.3		
<b>Gravelly Clay</b> Brown mottled red, moist, soft, non-plastic, no odour, no staining, ironstone fragments throughout			1		DS	Y		0.2	BP_MW05_1.0	
			2					0.2		
			3					0		
			4					0.1		
			5					0		

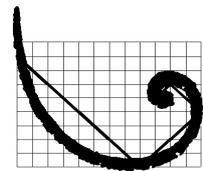
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BP\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>7</b>	Final Water Level (m bgl): <b>1.945</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>169</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.67</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307346.7488</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414293.3283</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Gravelly Clay</b> Black, wet, soft, non-plastic, organic odour, fine to medium sub rounded gravel			6		US	Y		0	BP_MW05_6.0	
			7						0.1	
End of Log										

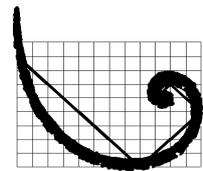
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BP\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **25/11/2013** Total Depth (m): **7** Final Water Level (m bgl): **1.27**  
 Drill Finish Date: **26/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): **169.47**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **169.36**  
 Driller: **Eric Grima** Casing Diam. (mm): **50** Easting (MGA): **307316.389**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Gatic** Northing (MGA): **6414279.46**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **5.5**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Cracked, no staining			0.1		DS	Y		0.1	BP_MW06_0.2	
<b>Fill</b> Sand, brown, moist, loose, medium to coarse, poorly sorted, sub rounded, no odour, no staining			0.3					0.3		
<b>Gravelly Clay</b> Orange brown, moist, soft, medium plasticity, no odour, no staining			1					0.2		
			2					0.2		
<b>Clay</b> Clay with organic matter, dark brown, moist, soft, medium plastic, organic odour			3							
<b>Clay</b> Brown, moist, soft, highly plastic, no odour, no staining			4							
<b>Sandy Clay</b> Grey mottled red and orange, moist, soft, low plasticity, no odour, no staining			4		US	Y		0	BP_MW06_4.0	
			5							

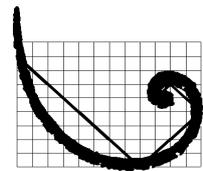
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BP\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>7</b>	Final Water Level (m bgl): <b>1.27</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>169.47</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>169.36</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307316.389</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414279.46</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Shale</b> Weathered, red brown, moist, no odour, no staining			6							
End of Log			7							
			8							
			9							
			10							

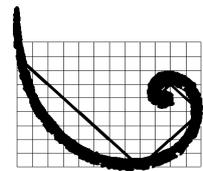
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **14/11/2013** Total Depth (m): **50** Final Water Level (m bgl): **43.216**  
 Drill Finish Date: **28/11/2013** Hole Diam. / Width (mm): **125** Elevation (Ground): **189.49**  
 Drill Co: **Numac** Casing Type: **PVC** Elevation (Case): **189.4**  
 Driller: **Phil Brinton** Casing Diam. (mm): **50** Easting (MGA): **307649.054**  
 Drill Method: **NDD/PT/SFA/AH** Surface Completion: **Gatic** Northing (MGA): **6413541.819**  
 Hole Type: **Monitoring Well** Water Strike (m bgl): **-**

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Fill</b> Gravelly sand, yellow/brown, dry, loose, medium grained, poorly sorted, no odour, no staining. Rounded gravels (ironstone)					DS	N		0.1	BQ_MW01_0.1		
					DS	N		0.2	BQ_MW01_1.5		
<b>Fill</b> Gravelly clay, orange/brown, moist, medium - stiff, low plasticity, no odour, no staining.			1					0			
<b>Clay</b> Orange/brown, dry, hard, moderate plasticity, no odour, no staining.			2					0.1			
<b>Sandstone</b> Weathered, orange/brown and pale grey, moist, medium - dense, low plasticity, no staining, no odour.			3								
<b>Sandstone</b> Very dense layer			4								
<b>Siltstone</b> Weathered, dry, dark grey, siltstone with minor sand (5%), no odour, no staining.			5					0			
			6					0			
			7						0		
			8							0	
			9							0	
			10							0	

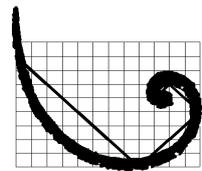
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>50</b>	Final Water Level (m bgl): <b>43.216</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>189.49</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>189.4</b>
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307649.054</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413541.819</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11					0		
			12					0		
			13					0		
			14					0		
			15					0		
			16					0		
			17					0		
			18					0		
			19					0		
			20					0		

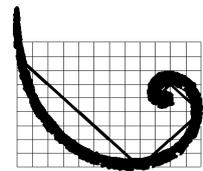
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>50</b>	Final Water Level (m bgl): <b>43.216</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>189.49</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>189.4</b>
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307649.054</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413541.819</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			21					0		
<b>Siltstone</b> Weathered, dry, dark grey, no odour, no staining.			22					0		
			23					0		
			24					0		
			25					0		
			26					0		
			27					0		
			28					0		
			29					0		
			30					0		

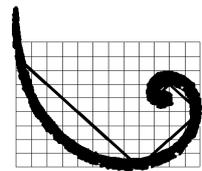
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Log By: **SM/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>50</b>	Final Water Level (m bgl): <b>43.216</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>189.49</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>189.4</b>
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307649.054</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413541.819</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			31					0		
			32					0		
			33					0		
			34					0		
			35					0		
			36					0		
			37					0		
			38					0		
			39					0		
			40					0		

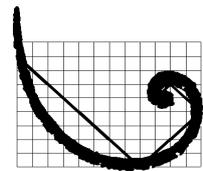
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Log By: **SM/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>50</b>	Final Water Level (m bgl): <b>43.216</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>189.49</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>189.4</b>
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307649.054</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413541.819</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			41					0		
			42					0		
			43					0		
			44					0		
			45					0		
			46					0		
			47					0		
			48					0		
			49					0		
			50					0		

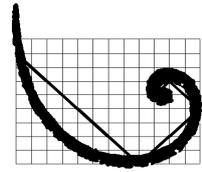
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Log By: **SM/WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>5.7</b>	Final Water Level (m bgl): <b>3.1</b>
Drill Finish Date: <b>2/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>148.55</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>-</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308930.294</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412190.162</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Brown, moist, soft, non-plastic, no odour, no staining			0		DS	N		0	BQ_MW02_0.2	
<b>Sandy Clay</b> Brown mottled red brown, moist, medium stiff, low plasticity, no odour, no staining			0					0		
			1					0		
			0					0		
<b>Clay</b> Clay with weathered shale, grey mottled orange, moist, soft, non-plastic, no odour, no staining			2							
			3							
			4		US	Y		0	BQ_MW02_3.8	
			5							

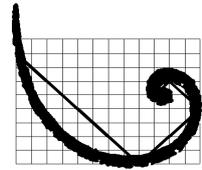
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>5.7</b>	Final Water Level (m bgl): <b>3.1</b>
Drill Finish Date: <b>2/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>148.55</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>-</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308930.294</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412190.162</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
End of Log			6 7 8 9 10							

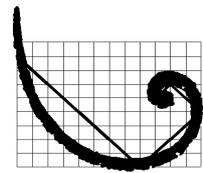
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>5.7</b>	Final Water Level (m bgl): <b>0.35</b>
Drill Finish Date: <b>2/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>158.11</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>158.820</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308672.001</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412351.436</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Dark brown, dry, soft, non-plastic, no odour, no staining			0		DS	N		0	BQ_MW03_0.2	
<b>Clay</b> Brown, mottled red brown, moist, soft, medium plasticity, no odour, no staining			1					0		
			2					0		
<b>Clay</b> Clay with weathered shale, grey mottled orange, moist, soft, non-plastic, no odour, no staining			3					0		
			4					0		
			5		US	Y		0	BQ_MW03_4.5	
								0		

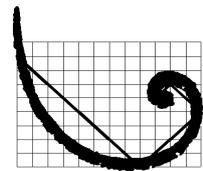
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>5.7</b>	Final Water Level (m bgl): <b>0.35</b>
Drill Finish Date: <b>2/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>158.11</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>158.820</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308672.001</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412351.436</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
End of Log			6 7 8 9 10							

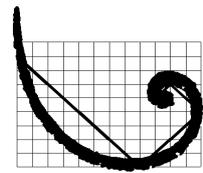
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>8.19</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>178.75</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.310</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308369.491</b>
Drill Method: <b>NDD/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412458.453</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Dark brown, moist, soft, non-plastic, no odour, no staining, rootlets  <b>Sandy Clay</b> Dark brown, moist, medium stiff, non-plastic, no odour, no staining			0		DS	N			BQ_MW04_0.2	
			0					0		
			0					0		
<b>Shale</b> Weathered, grey brown, dry, dense, friable, no odour, no staining			1					0		
			2					0		
			3					0		
			4					0		
<b>Siltstone</b> Grey, dry, fine grained, no odour, no staining, less dust from 8.0mbgl			5							

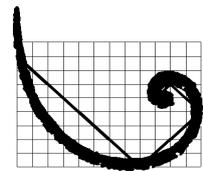
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>8.19</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>178.75</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.310</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308369.491</b>
Drill Method: <b>NDD/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412458.453</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			0							
			6							
			7							
			8							
			9							
			10							

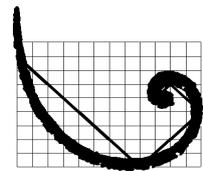
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>7.5</b>	Final Water Level (m bgl): <b>7.23</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>174.74</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>175.490</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308650.998</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412518.656</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Dark brown, moist, soft, non-plastic, no odour, no staining			0		DS	N		0	BQ_MW05_0.2	
<b>Sandy Clay</b> Dark brown, moist, medium stiff, non-plastic, no odour, no staining			0					0		
<b>Shale</b> Weathered, grey brown, dry, friable, no odour, no staining			1					0		
			2		US	Y		0	BQ_MW05_2.0	
			3					0		
			4					0		
			5					0		

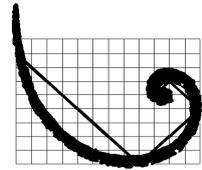
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>7.5</b>	Final Water Level (m bgl): <b>7.23</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>174.74</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>175.490</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308650.998</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412518.656</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Sandy Clay</b> Brown, moist, soft, low plasticity, no odour, no staining			6					0		
			7							
End of Log			8							
			9							
			10							

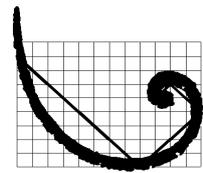
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>308960</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6412554</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Clay</b> Red brown, moist, soft, non-plastic, no odour, no staining			0		DS	N		0	BQ_MW06_0.2	
								0		
<b>Shale</b> Weathered, grey brown, moist, friable, no odour, no staining, well dry at 10.0mbgl, well reinstated			1					0		
								0		
			2		US	Y		0	BQ_MW06_2.0	
			3							
			4							
			5							

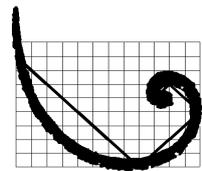
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>308960</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6412554</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

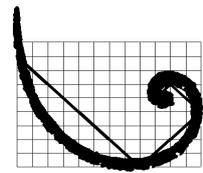
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>8.54</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>177</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>177.740</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309050.058</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412627.679</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Dark brown, moist, soft, non-plastic, no odour, no staining			0		DS	N		0	BQ_MW07_0.2	
<b>Sandy Clay</b> Brown, moist, low plasticity, no odour, no staining			1					0		
<b>Shale</b> Weathered, grey brown, moist, friable, no odour, no staining			2		US	Y		0	BQ_MW07_2.0	
			3							
			4							
			5							

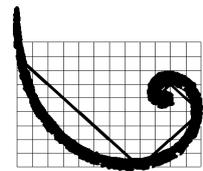
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>8.54</b>
Drill Finish Date: <b>28/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>177</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>177.740</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309050.058</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412627.679</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
<b>Sandy Clay</b> Grey mottled orange, wet, soft, medium plasticity, no odour, no staining			9							
			10							

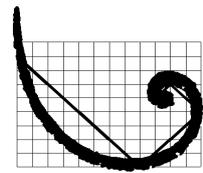
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>6.5</b>	Final Water Level (m bgl): <b>3.14</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>151.8</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>152.360</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309199.504</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412914.846</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Gravelly Clay</b> Brown, moist, stiff, non-plastic, no odour, no staining, rootlets throughout			0		DS	N		0	BQ_MW08_0.5	
<b>Clay</b> Dark brown, moist, medium stiff, low plasticity, trace ironstone gravel			1					0.1		
<b>Clay</b> Brown, moist, stiff, high plasticity, no odour, no staining			2					0.1		
<b>Sandy Clay</b> Grey mottled orange, moist, soft, low plasticity, no odour, no staining, wet from 4.5mbgl			3		US	Y		0	BQ_MW08_3.9	
			4							
			5							

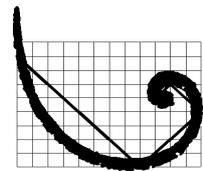
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>6.5</b>	Final Water Level (m bgl): <b>3.14</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>151.8</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>152.360</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309199.504</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412914.846</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
End of Log			7							
			8							
			9							
			10							

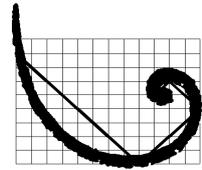
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **13/11/2013** Total Depth (m): **4** Final Water Level (m bgl): -  
 Drill Finish Date: **27/11/2013** Hole Diam. / Width (mm): **250** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Eric Grima** Casing Diam. (mm): **N/A** Easting (MGA): **309240**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Backfilled** Northing (MGA): **6413335**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Reworked clay with silt, grey brown, dry, no odour, no staining rootlet inclusions, gravel inclusions increasing with depth			0		DS	Y		0.1	BQ_MW09_0.05	
<b>Clay</b> Natural, light brown, moist, plastic, no odour, no staining, becoming dark brown with depth			0.5		DS	N		0.1	BQ_MW09_0.5	
<b>Shale</b> Weathered, brown, dry, becoming laminated with depth, well dry at 4.0mbgl, well reinstated			1		DS	N		0.1	BQ_MW09_1.0	
			2							
			3							
			4							
End of Log			5							

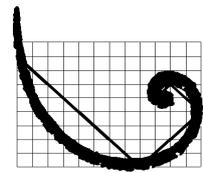
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW10**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>5.3</b>	Final Water Level (m bgl): <b>0</b>
Drill Finish Date: <b>15/11/2013</b>	Hole Diam. / Width (mm): <b>250</b>	Elevation (Ground): <b>156.31</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>156.820</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308378.315</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413806.143</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Reworked clay with gravel throughout, brown with red mottling, moist, plastic, no odour, no staining, fine to medium gravel (ironstone, shale etc.), increasing moisture at 1.0mbgl (level of adjacent drainage ditch)			0		DS	Y		0.1	BQ_MW10_0.05	
			0.1		DS	Y		0.2	BQ_MW10_0.5	
<b>Gravel</b> Brown to grey, angular, fine to coarse gravels/shale, saturated, layered gravels			1					0.1		
			2					0.1		
<b>Gravelly Clay</b> Orange brown grading to grey at 3.2mbgl, moist, high plasticity, no odour, no staining			3					0		
			3.5					0.1	BQ_MW10_3.5	
<b>Gravel</b> Shale, orange brown, grey, layered ironstone and shale			4		US	Y		0.1		
			5							

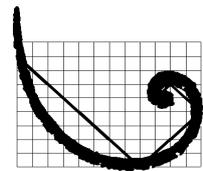
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW10**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>5.3</b>	Final Water Level (m bgl): <b>0</b>
Drill Finish Date: <b>15/11/2013</b>	Hole Diam. / Width (mm): <b>250</b>	Elevation (Ground): <b>156.31</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>156.820</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308378.315</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413806.143</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
End of Log			6 7 8 9 10							

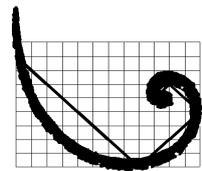
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW11**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>5</b>	Final Water Level (m bgl): <b>1.92</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>127.92</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>128.640</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>309895.578</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6412998.541</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>3.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Clay</b> Topsoil, light brown, dry, minor plasticity, no odour, no staining			0		DS	Y		0.1	BQ_MW11_0.1	
<b>Clay</b> Grey brown, moist, plastic, no odour, no staining, becoming brown with red mottling from 0.5mbgl, increasing plasticity with depth, wet from 3.5mbgl			0.1					0.1		
			1					0.1		
			2					0		
			3					0		
			4		US	Y		0	BQ_MW11_3.8	
			5					0		

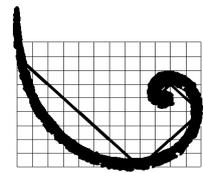
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW12**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>8.9</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309850</b>
Drill Method: <b>NDD/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6412808</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Clay</b> Red brown, moist, soft, non-plastic, no odour, no staining, medium stiff from 0.5mbgl			0		DS	N		0	BQ_MW12_0.2	
								0		
<b>Clayey Sand</b> Brown, moist, medium dense, fine to medium grained, well sorted, no odour, no staining, dry at 8.9mbgl, well reinstated			1					0		
			2					0		
			3					0		
			4							
			5							

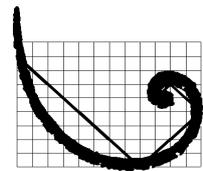
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW12**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>8.9</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309850</b>
Drill Method: <b>NDD/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6412808</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6 7 8							
End of Log			9 10							

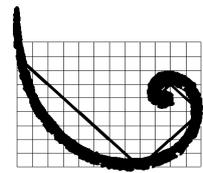
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW13**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>5.8</b>	Final Water Level (m bgl): <b>3.6</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>173.51</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>174.430</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308942.362</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413730.166</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Sandy clay with trace gravel (topsoil), grey brown, moist, non-plastic, no odour, no staining  <b>Gravelly Clay</b> Red brown, moist, medium stiff, low plasticity, no odour, no staining			0							
			0.1	DS	N			0.1	BQ_MW13_0.2	
			0.2					0.2		
<b>Silty Clay</b> Dry, pale grey mottled orange, soft, low plasticity, no odour, no staining, wet from 4.3mbgl			2							
			0	US	Y			0	BQ_MW13_1.8	
			3							
			4							
			5							

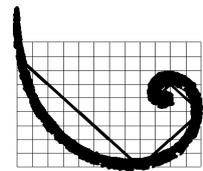
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BQ\_MW13**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>5.8</b>	Final Water Level (m bgl): <b>3.6</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>173.51</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>174.430</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308942.362</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413730.166</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.3</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
End of Log			6 7 8 9 10							

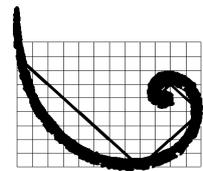
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BQ\_MW14**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>2.5</b>	Final Water Level (m bgl): <b>1.225</b>
Drill Finish Date: <b>3/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>141.38</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>141.910</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308529.086</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414183.085</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Dark brown, moist, soft, non-plastic, no odour or staining  <b>Sandy Clay</b> Grey mottled brown, moist, soft, low plasticity, no odour or staining. Trace gravels increasing with depth. Wet from 1.5m bgl			0							
			0.2	DS	Y		0	BQ_MW14_0.2		
			1					0		
			2					0		
			2.4					0		
			2.4		US	Y		0	BQ_MW14_2.4	
End of Log			3							
			4							
			5							

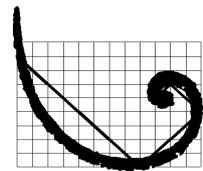
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BR\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>21/11/2013</b>	Total Depth (m): <b>52</b>	Final Water Level (m bgl): <b>29.02</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>104.96</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>105.56</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>315228.068</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411563.661</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>50</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravel consistency, predominantly siltstone with coal fragments, dark grey, dense.			0							
<b>Siltstone</b> Weathered, dark grey, moist.			1				0			
<b>Coal</b> Black, slightly moist.			2							
			3							
			4							
			5							
<b>Siltstone</b> Weathered, dark grey, dry.			6							
			7							
			8							
<b>Sandstone</b> Weathered, grey, dry, medium grained with a degree of fines			9							
			10							

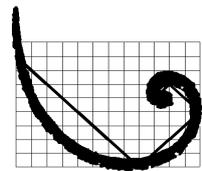
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BR\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>21/11/2013</b>	Total Depth (m): <b>52</b>	Final Water Level (m bgl): <b>29.02</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>104.96</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>105.56</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>315228.068</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411563.661</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>50</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
			13							
			14							
			15							
			16							
			17							
<b>Siltstone</b> Weathered, dark grey, dry.			18							
			19							
			20							

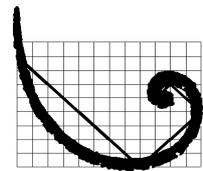
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Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BR\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>21/11/2013</b>	Total Depth (m): <b>52</b>	Final Water Level (m bgl): <b>29.02</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>104.96</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>105.56</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>315228.068</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411563.661</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>50</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			21							
<b>Coal</b> Black, grey, dry.			22							
			23							
			24							
			25		DS	Y		0	BR_MW01_25MBG	
			26							
<b>Sandstone</b> Weathered, grey, dry, medium grained with some fines			27							
			28							
			29							
			30							

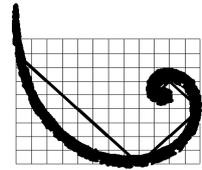
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Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BR\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>21/11/2013</b>	Total Depth (m): <b>52</b>	Final Water Level (m bgl): <b>29.02</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>104.96</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>105.56</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>315228.068</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411563.661</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>50</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			31							
			32							
			33							
			34							
<b>Sandstone</b> Weathered, dark grey, dry, medium grained with some fines			35							
			36							
<b>Coal</b> Thin band, black, dry.			37							
<b>Siltstone</b> Weathered, dark grey, dry.			38							
			39							
			40							

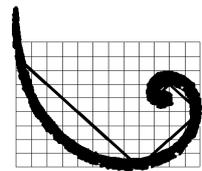
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Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BR\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>21/11/2013</b>	Total Depth (m): <b>52</b>	Final Water Level (m bgl): <b>29.02</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>104.96</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>105.56</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>315228.068</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411563.661</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>50</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			41							
			42							
			43							
			44							
<b>Sandstone</b> Slightly weathered, grey, dry, poorly sorted with high degree of fines			45							
			46							
<b>Siltstone</b> Weathered, dark grey, dry.			47							
			48							
<b>Sandstone</b> Slightly weathered, grey, dry, poorly sorted with high degree of fine sand			49		DS	Y			BR_MW01_49MBGS	
<b>Sandstone</b> Slightly weathered, grey, moist, poorly sorted with high degree of fines			50							

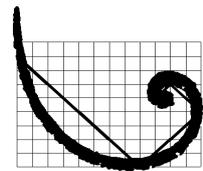
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Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BR\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>21/11/2013</b>	Total Depth (m): <b>52</b>	Final Water Level (m bgl): <b>29.02</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>104.96</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>105.56</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>315228.068</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6411563.661</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>50</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Sandstone</b> Slightly weathered, grey, wet, poorly sorted with high degree of fines			51							
End of Log			52							
			53							
			54							
			55							
			56							
			57							
			58							
			59							
			60							

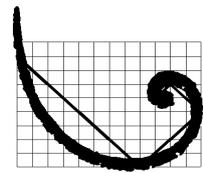
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Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BR\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>19/11/2013</b>	Total Depth (m): <b>32.6</b>	Final Water Level (m bgl):
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>65.52</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>66.23</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>317776.222</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6406598.339</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty clay (30%) and coarse gravel (70%) with large rock fragments (20 cm max). Mine spoil.			1					0		
<b>Fill</b> Siltstone rock chips (90%) with varying degrees of weathering, silty clay (10%). Mine spoil.			4							
<b>Sandstone</b> Lithic, weathered, light grey, dry, fine grained, poorly sorted.			9							

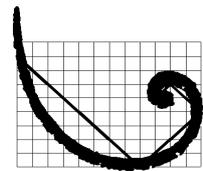
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Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BR\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>19/11/2013</b>	Total Depth (m): <b>32.6</b>	Final Water Level (m bgl):
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>65.52</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>66.23</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>317776.222</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6406598.339</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
			12							
<b>Sandstone</b> Lithic, weathered, light grey, slightly moist, fine grained, poorly sorted.			13							
<b>Coal</b> Black, slightly moist, soft.			14		DS	Y			BR_MW05_14.0	
<b>Siltstone</b> Weathered, dark grey, dry.			15							
<b>Sandstone</b> Lithic wacke, weathered, grey, dry, fine grained, poorly sorted.			16							
			17							
			18							
			19							
			20							

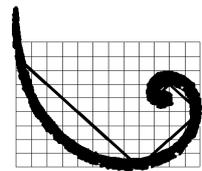
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Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BR\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>19/11/2013</b>	Total Depth (m): <b>32.6</b>	Final Water Level (m bgl):
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>65.52</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>66.23</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>317776.222</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6406598.339</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			21							
<b>Coal</b> Black, dry.			22							
			23							
			24							
			25							
<b>Siltstone</b> Weathered, dark grey, dry.			26							
			27							
			28							
			29							
			30							

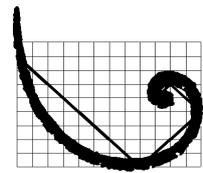
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BR\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>19/11/2013</b>	Total Depth (m): <b>32.6</b>	Final Water Level (m bgl):
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>65.52</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>66.23</b>
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>317776.222</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6406598.339</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Coal</b> Black, slightly moist.			31		DS	Y			BR_MW05_31.0	
<b>Sandstone</b> Lithic wacke, slightly weathered, grey, dry, fine grained, poorly sorted.			32							
End of Log			33							
			34							
			35							
			36							
			37							
			38							
			39							
			40							

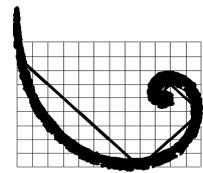
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BR\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>20</b>	Final Water Level (m bgl): <b>20.814</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>79.73</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>80.39</b>
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>316944.609</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6409453.053</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>17</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Mine spoil, clayey silt and gravel with large siltstone rock fragments (30 cm diameter max), light grey, slightly moist.			0 1							
<b>Fill</b> Mine spoil, clayey silt with rock fragments consisting of siltstone, lithic wacke sandstone and minor coal, light to dark grey, slightly moist.			2 3 4 5 6 7 8 9 10							

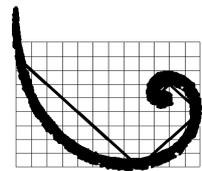
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BR\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>20</b>	Final Water Level (m bgl): <b>20.814</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>79.73</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>80.39</b>
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>316944.609</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6409453.053</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>17</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Fill</b> Mine spoil, clayey silt with rock fragments consisting of siltstone, lithic wacke sandstone and minor coal, light to dark grey, moist.			11							
			12		DS	Y			BR_MW06_12MBGS	
<b>Sandstone</b> Lithic wacke, weathered, light grey, wet, fine grained.			13							
			14							
			15							
			16							
			17							
			18		DS	Y			BR_MW06_18MBGS	
			19							
			20							

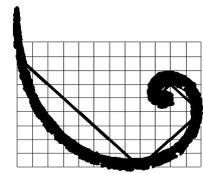
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BR\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Phil Brinton</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>315671</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6409647</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Mine spoil, dense gravel and rock fragments consisting of siltstone and sandstone (30 cm max diameter), minor clay silt, grey, slightly moist.			0							
<b>Fill</b> Mine spoil, siltstone and sandstone dust and chips, dry.			2		DS	Y			BR_MW09_2-3MBGS	
End of Log			3							
			4							
			5							

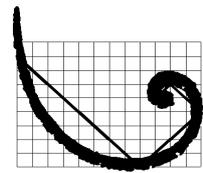
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BR\_MW11**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>9.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>317167</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6408093</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Mine spoil, moist, dark brown, dense, silty clay (40%) and coarse gravel (60%) with large rock fragments up to 30cm.			0							
<b>Fill</b> Mine spoil, rock chips consisting of fine grained sand with high fines content and siltstone (60%) with silty clay, weathered, light grey, slightly moist.			1							
			2					0		
			3					0		
			4					0		
<b>No Recovery</b> No recovery between 4.0 and 9.5m bgl due to pore space and advancing PVC Casing. Borehole abandoned at 9.5m bgl due to collapsing mine spoil.			5							

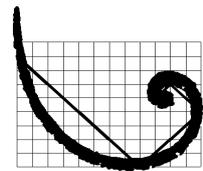
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BR\_MW11**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>9.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Matt Moroney</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>317167</b>
Drill Method: <b>NDD/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6408093</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8		DS	Y			BR_MW11_9MBGS	
			9							
End of Log			10							

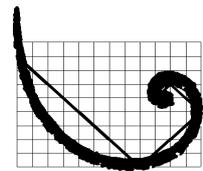
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **WG**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BS\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **1/11/2013** Total Depth (m): **15** Final Water Level (m bgl): -  
 Drill Finish Date: **13/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **302368**  
 Drill Method: **NDD/PT/SFA/AH** Surface Completion: **Backfilled** Northing (MGA): **6405374**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Clay</b> Brown, moist, medium dense, non-plastic, no staining, no odour, rootlets			0		DS	N		0	BS_MW01_0.2	
			0					0		
			1					0		
<b>Clayey Gravel</b> Brown, moist, dense, fine to coarse, well sorted, sub angular, no stain, no odour								0		
<b>Clayey Sand</b> Grey, moist, loose, fine to coarse, well sorted, no stain, no odour								0		
<b>Sandy Clay</b> Grey mottled brown, dry, soft, friable, non-plastic, no stain, no odour			2					0		
					US	N		0	BS_MW01_2.7	
<b>Clayey Gravel</b> Light brown, dry, dense, fine to coarse, well sorted, sub angular, no stain, no odour			3							
			4							
			5							

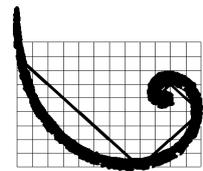
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BS\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>1/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>13/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>302368</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6405374</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Sandy Clay</b> Brown, moist, soft, non-plastic, no stain no odour										
<b>Shale</b> Weathered, grey-brown, dry, friable, no stain, no odour.										

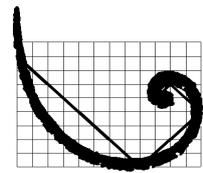
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BS\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **1/11/2013** Total Depth (m): **2.7** Final Water Level (m bgl): -  
 Drill Finish Date: **8/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **302371**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6405361**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silt</b> Black, moist, medium dense, non plastic, no stains, no odour, rootlets			0		DS	Y		0	BS_SB01_0.2	
<b>Sandy Clay</b> Brown, moist, soft, non-plastic, no stains, no odour, trace organic matter			1					0		
<b>Clayey Gravel</b> Grey, moist, loose, fine to coarse, well sorted, no stain, no odour			1					0		
<b>Clayey Gravel</b> Brown, moist, dense, fine to coarse, well sorted, sub angular, no stain, no odour			1					0		
<b>Sandy Clay</b> Grey, mottled brown, dry, soft, friable, non-plastic, no stain, no odour			2					0		
			2.6		US	Y		0	BS_SB01_2.6	
End of Log			3							
			4							
			5							

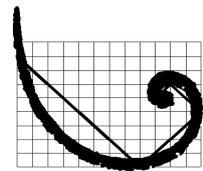
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BS\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **1/11/2013** Total Depth (m): **3** Final Water Level (m bgl): -  
 Drill Finish Date: **8/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **302401**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6405386**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Bitumen</b>			0		DS	N		0	BS_SB02_0.2	
<b>Gravelly Clay</b> Light brown, dry, medium dense, non-plastic, no stains, no odour, fine to medium rounded gravel (road base)			0					0		
<b>Sandy Clay</b> Grey mottled brown, moist, soft, low plastic, friable, no stains, no odour.			1					0		
			2					0		
<b>Sandy Clay</b> Pink			2.8		US	N		0	BS_SB02_2.8	
<b>Sandy Clay</b> Grey mottled brown			3							
<b>Sandy Clay</b> Pink			3							
End of Log			4							
			5							

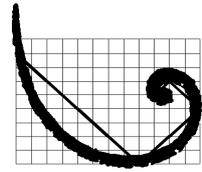
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BT\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl):
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>91.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>92.62</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>303125.66</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6405992.856</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Dark brown, dry, medium stiff, no stain, no odour, trace rootlets			0		DS	N		0	BT_MW01_0.2	
								0		
<b>Sandy Clay</b> Brown, mottled light grey, medium dense, non plastic, no stains, no odour			1					0		
								0		
<b>Shale</b> Weathered, grey, dry, friable, no stain, no odour			2							
<b>Sandy Clay</b> Brown, mottled light grey, medium stiff, non plastic, no stains, no odour			3		DS			0	BT_MW01_2.6	
<b>Shale</b> Weathered, grey, dry, friable, no stain, no odour			4							
<b>Sandy Clay</b> Light brown, dry, medium stiff, friable, non-plastic, no stain, no odour			5							

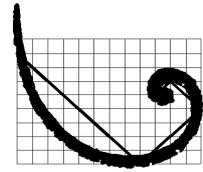
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BT\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl):
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>91.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>92.62</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>303125.66</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6405992.856</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Sandstone</b> Orange-grey, dry, no stain, no odour			0 1 2 3 4 5 6 7 8							
<b>Shale</b> Weathered, brown, dry, no stain, no odour			9 10							

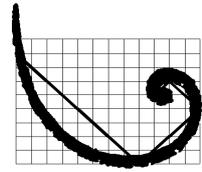
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BT\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>15</b>	Final Water Level (m bgl):
Drill Finish Date: <b>12/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>91.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>92.62</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>303125.66</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6405992.856</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl):	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Sandstone</b> Orange, dry, stain, no odour			11							
<b>Shale</b> Grey, dry, no stain, no odour			12							
<b>Sandstone</b> Brown, dry, no stain, no odour			13							
<b>Shale</b> Grey, dry, no stain, no odour										
<b>Sandstone</b> Brown, dry, no stain, no odour										
<b>Shale</b> Grey, dry, no odour			14							
			15							

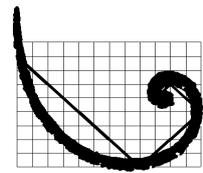
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Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BT\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>11/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>303136</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6406045</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silt</b> Gravel inclusions, brown, dry, fine to coarse gravels and boulders, no staining or odour			0		DS	N		0	BT_SB01_0.1	
								0		
								0		
<b>Silty Clay</b> White-brown, slightly moist, firm, non-plastic, no staining, no odour, minor coarse gravel			1		DS	N		0	BT_SB01_1.5	
<b>Shale</b> Weathered, light grey, dry, friable, no stain, no odour			2							
<b>sandy clay</b> Grey, mottled brown, dry, medium stiff, friable, non-plastic, no stain, no odour										
<b>Shale</b> Weathered, grey, dry, friable, no stain, no odour			3		US	Y		0	BT_SB01_2.9	
End of Log			3							
			4							
			5							

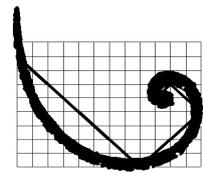
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BT\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>5/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>11/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>303127</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6406031</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravelly Clay, pale grey, dense, low-plasticity, fine to medium gravels, no staining, no odour			0		DS	N		0	BT_SB02_0.1	
<b>Gravelly Clay</b> White-brown, slightly moist, dense, low plasticity, fine to coarse gravels, no staining, no odour			1					0		
<b>Shale</b> Weathered, light grey, dry, friable, no stain, no odour			2					0		
<b>Sandy Clay</b> Grey, mottled brown, moist, medium stiff, non-plastic, no stain, no odour			3		US	N			BT_SB02_2.8	
<b>Shale</b> Weathered shale, grey, dry, friable, no stain, no odour			3							
End of Log			4							
			5							

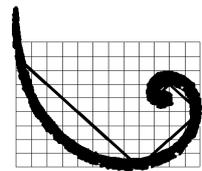
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BU\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>4.76</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.85</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.73</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307624.798</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413887.011</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0					0		
<b>Fill</b> Gravelly clay, orange-brown, mottled grey, moist, medium stiff, non-plastic, no odour or staining, trace subrounded river gravels. Weathered shale fragments throughout			0.1		DS	Y		0.1	BU_MW01_0.5	
			1					0.1		
			2					0		
<b>Gravelly Clay</b> Red-brown with grey mottling, dry to moist, gravels, shale, medium to coarse, angular, some plasticity			2		US	Y		2	BU_MW01_1.75	
			3					1.2		
			3					0.9		
<b>Gravelly Clay</b> Slight increase in moisture and silt content			3		US	Y		1.5	BU_MW01_3.0	
			4					1.8		
<b>Gravelly Clay</b> Increase in plasticity			4							
			5					2.1		
<b>Gravelly Clay</b> Moist to dry			5							

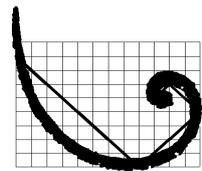
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Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BU\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>4.76</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.85</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.73</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307624.798</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413887.011</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>-</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Gravelly Clay</b> Dry, red-brown with grey mottling			6							
<b>Gravelly Clay</b> Slight increase in moisture			7							
			8							
			9							
			10							

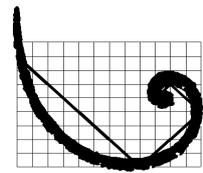
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Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BU\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>4.08</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.75</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.43</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307630.441</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413853.285</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

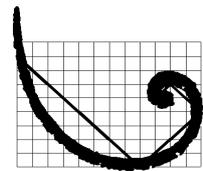
Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravelly clay, orange-brown, mottled grey, moist, soft, non-plastic, no odour or staining, sandstone boulders throughout,			0		DS	Y		0.1		
								0	BU_MW02_0.5	
<b>Gravelly Clay</b> Orange-brown, mottled grey, moist, medium stiff, low plasticity, no odour or staining			1					0		
								0.1		
			2					1.8		
					US	Y		1.5	BU_MW02_2.5	
<b>Shale</b> Dry, Shale fragments throughout, completely weathered, dry, minor gravel			3					1.5		
			4		US	Y		1.8	BU_MW02_4.0	
<b>Shale</b> Slightly more plastic			5					1		

**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/HC**  
 Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BU\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>4.08</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>179.75</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.43</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307630.441</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413853.285</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Clay</b> Red-brown (completely weathered) red-brown with grey mottling			 6 7 8 9 10							

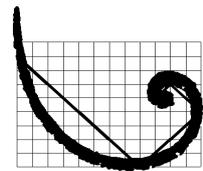
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Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BU\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>4.635</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>200</b>	Elevation (Ground): <b>179.73</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.49</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307642.358</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413879.504</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Gravelly Clay</b> Gravelly clay, grey-brown, mottled orange, moist, medium-stiff, non-plastic, no odour or staining, weathered shale fragments throughout			0					0			
			0.1		DS	Y		0.1	BU_MW03_0.5		
<b>Gravelly Clay</b> Light brown with grey mottling, dry, ironstone gravels (angular), medium grained, no odour, no staining, completely weathered			1					0			
			2		US	Y		0.5	BU_MW03_2.5		
			3						1		
			4		US	Y		1	BU_MW03_4.0		
			5					1.2			

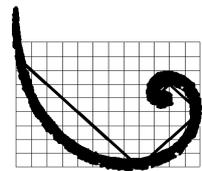
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Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BU\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>4.635</b>
Drill Finish Date: <b>27/11/2013</b>	Hole Diam. / Width (mm): <b>200</b>	Elevation (Ground): <b>179.73</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.49</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307642.358</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413879.504</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					1.5		
<b>Shale</b> Fully (Completely) weathered			7							
			8							
			9							
			10							

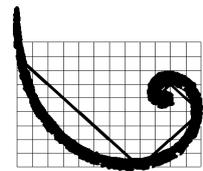
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Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BU\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **26/11/2013** Total Depth (m): **3** Final Water Level (m bgl): -  
 Drill Finish Date: **27/11/2013** Hole Diam. / Width (mm): **85** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **307624**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413871**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0					0.1		
<b>Fill</b> Gravelly Clay, orange-brown, mottled red, moist, soft, low plasticity, no odour, no staining					DS	Y		0	BU_SB01_0.5	
<b>Silty Clay</b> Orange-brown, mottled grey, moist, soft, non-plastic, no odour or staining, completely weathered shale.			1					0.2		
								0		
			2		US	Y		7.3	BU_SB01_2.0	
								2		
			3		US	Y		1.5	BU_SB01_3.0	
End of Log										
			4							
			5							

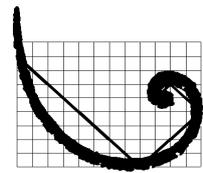
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Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BU\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **26/11/2013** Total Depth (m): **3** Final Water Level (m bgl): -  
 Drill Finish Date: **27/11/2013** Hole Diam. / Width (mm): **85** Elevation (Ground): **0**  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **307610**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413848**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0		DS	Y		0	BU_SB02_0.25	
<b>Fill</b> Gravelly clay, orange-brown, mottled red, moist, soft, low plasticity, no odour or staining, weathered shale throughout			0.1		DS	N		0.1	BU_SB02_0.5	
			1					0		
<b>Silty Clay</b> Trace gravel, orange-brown mottled grey, moist, soft, non-plastic, no odour or staining. Completely weathered shale			1.6		US	Y		3.4	BU_SB02_1.6	
			2					2		
			2.5		US	Y		2	BU_SB02_2.5	
			3					1.5		
End of Log			4							
			5							

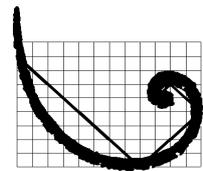
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Log By: **SM/HC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>8</b>	Final Water Level (m bgl): <b>4.58</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.16</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.04</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306779.836</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414221.869</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, dark brown, moist, medium dense, fine grained, moderately sorted, no odour, no staining			0		DS	N			BV_MW01_0.1	
<b>Fill</b> Clayey gravel, brown, moist, fine to coarse, poorly sorted, no odour or staining, Concrete, sandstone and shale fragments throughout			1							
<b>Sandy Clay</b> Grey, mottled red and orange, moist, soft, non plastic, no stain, no odour			2							
<b>Clay</b> With organic matter, dark brown, moist, soft, low plasticity, organic odour, no staining			3							
<b>Clay</b> Brown, moist, soft, highly plastic, no stain, no odour. Becoming red-brown with depth, increased moisture content from 6.8m bgl			4							
			5		US	N			BV_MW01_5.0	

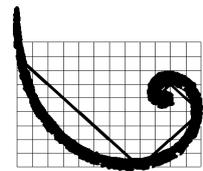
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>8</b>	Final Water Level (m bgl): <b>4.58</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.16</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.04</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306779.836</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414221.869</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6						BV_MW01_3.0	
			7							
			8							
End of Log			9							
			10							

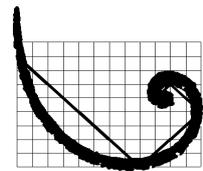
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306976</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414154</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Silt</b> Brown, dry, low plasticity, grass on surface, no staining, no odour			0	■	DS	N		0.1	BV_MW02_0.1	
<b>Fill</b> Silty Gravel, brown, dry, medium dense, sub angular, coarse, gravel, no staining, no odour, minor quartz and mudstone			0.2					0.2		
<b>Clayey Gravel</b> Pale brown, weathered sandstone, dry, dense, no staining, no odour, coarse gravel			1					0.1		
<b>Sandy Clay</b> Brown mottled red and grey, moist, soft, non-plastic, no odour, no staining			2					0		
			3	■	US	N		0	BV_MW02_3.1	
			4	■	US	N		0	BV_MW02_4.0	
			5					0		

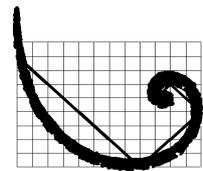
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306976</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414154</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0		
<b>Shale</b> Red brown, dry, friable, no stain, no odour			7							
			8							
			9							
			10							

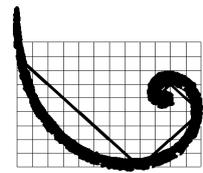
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **11/11/2013** Total Depth (m): **10** Final Water Level (m bgl): -  
 Drill Finish Date: **21/11/2013** Hole Diam. / Width (mm): **100** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Adrian Jarvis** Casing Diam. (mm): **N/A** Easting (MGA): **307128**  
 Drill Method: **NDD/PT/AH** Surface Completion: **Backfilled** Northing (MGA): **6414072**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b>										
<b>Fill</b> Clay, orange-brown, moist, occasional coarse gravels, no odour, no staining					DS	N		0.1	BV_MW03_0.3	
<b>Fill</b> Clay, red-brown, occasional large shale gravel			1					0		
<b>Fill</b> Clay, brown, moist, medium plasticity, no staining no odour			2					0.1		
<b>Fill</b> Clay, dark brown to black, High plasticity, moist, slight organic odour, possible staining					US	N		0.5		
<b>Fill</b> Clay, orange-brown to brown, slightly moist, no odour, no staining			3					0.4	BV_MW03_2.5	
<b>Fill</b> Clayey Gravel, red-brown, dry, low plasticity								0.4		
<b>Shale</b> Bedrock			4					0.5		
			5							

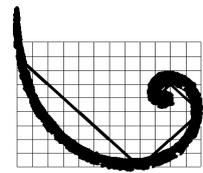
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307128</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414072</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

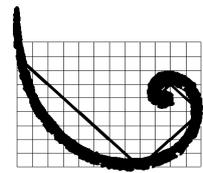
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Log By: **AM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>11.35</b>	Final Water Level (m bgl): <b>10.036</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.24</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.13</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307290.334</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414035.094</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>10</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clayey Silty, brown, slightly moist, low plasticity, firm, no staining, no odour			0					0		
<b>Fill</b> Clayey Gravel, grey to brown, dry, dense, shale gravels, angular, poorly sorted, no odours, no staining			0.5	■	DS	N		0	BV_MW04_0.5	
			1					0		
			2					0		
<b>Fill</b> Gravel, dry grey, shale, very dense			2	■	US	N		1	BV_MW04_2.0	
<b>Fill</b> Gravelly Clay, dark grey, highly plastic, moist, no odour, no staining			2.5							
<b>Fill</b> Clay, pale brown to orange, moist, medium to high plasticity, no staining, no odour			3					0.5		
<b>Fill</b> Clay, dry brown to grey, moist, high plasticity			4					0.5		
<b>Fill</b> Clay, orange brown			4.5					0.5		
<b>Silty clay</b> Dark brown, high plasticity, moist, root zones throughout			5					0.4		
<b>Shale</b> And Sandstone			5					0.4		

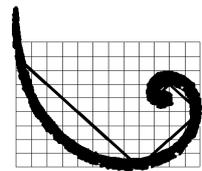
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>11.35</b>	Final Water Level (m bgl): <b>10.036</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.24</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.13</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307290.334</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414035.094</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>10</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

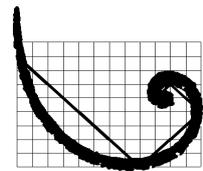
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>11.35</b>	Final Water Level (m bgl): <b>10.036</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.24</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.13</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307290.334</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414035.094</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>10</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
End of Log			12							
			13							
			14							
			15							

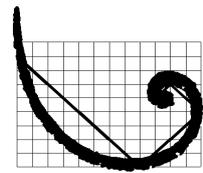
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **11/11/2013** Total Depth (m): **12.3** Final Water Level (m bgl): -  
 Drill Finish Date: **20/11/2013** Hole Diam. / Width (mm): **125** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Eric Grima** Casing Diam. (mm): **N/A** Easting (MGA): **307267**  
 Drill Method: **NDD/PT/SFA** Surface Completion: **Backfilled** Northing (MGA): **6414078**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clayey Silt, brown, dry, low plasticity, no odour, no staining			0		DS	N		0	BV_MW05_0.2	
<b>Fill</b> Clayey Gravel, brown to grey, dry, dense, shale gravels, no staining, no odour			0					0		
			1					0.5		
			0					0		
			2					0.2		
<b>Fill</b> Gravelly Clay, grey-brown, slightly moist, reworked fill, no odour, no staining			3		US	N		1.8	BV_MW05_3.0	
<b>Silty Clay</b> Dark brown to black, moist, high plasticity, old root zone, no staining, no odour			3							
<b>Clay</b> Orange brown mottled brown, soft			3							
<b>Clay</b> Extremely weathered sandstone, red to brown, firm, minor sandstone gravels			3							
<b>Sandstone</b> Orange-brown, very dense			4					0.3		
			5							

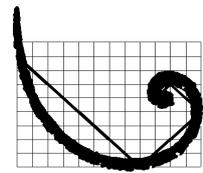
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>12.3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307267</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414078</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			0							
<b>Clay</b> Moist, grey			6							
<b>Sandstone</b> Very hard, dense, dry			8							
			9							
			10							

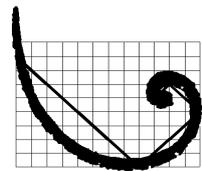
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>12.3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307267</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414078</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
	•••••		11 12							
End of Log			13 14 15							

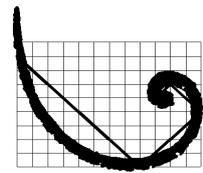
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>11.7</b>	Final Water Level (m bgl): <b>10.11</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.2</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.11</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307299.034</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414054.304</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>11</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clay, brown, dry, low plasticity, firm, no odours, no staining			0.2					0.2		
<b>Fill</b> Clayey Gravel, brown, medium dense, poorly sorted, sub angular, coarse, no staining, no odour			0.5	■	DS	N		0.2	BV_MW06_0.5	
			1.0					0		
			1.5					0.2		
			2.0	■	US	N		0.3	BV_MW06_2.0	
			2.5							
			3.0					0.2		
<b>Fill</b> Clayey Gravel, reworked shale, moist to wet (perched water), coarse gravels, no odour, no staining			3.5							
			4.0					0.2		
<b>Fill</b> Clay, moist, high plasticity, firm, no staining, no odour			4.5							
<b>Silty Clay</b> Dark brown to black, moist, high plasticity, old root zone			5.0					0.3		

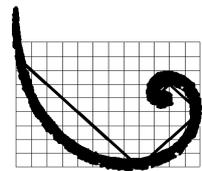
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>11.7</b>	Final Water Level (m bgl): <b>10.11</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.2</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.11</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307299.034</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414054.304</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>11</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Shale</b> And Sandstone, highly weathered with iron staining on fractures, slightly moist on fracture lines	[Symbol]	[Well]								
<b>Shale</b> And Siltstone, red to brown iron staining	[Symbol]	[Well]								
<b>Shale</b> Grey brown, very dense, no staining	[Symbol]	[Well]	6				0.2			
			7							
			8							
			9							
			10							

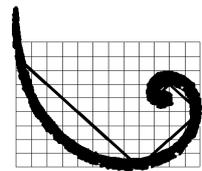
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>11.7</b>	Final Water Level (m bgl): <b>10.11</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.2</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.11</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307299.034</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6414054.304</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>11</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			11							
End of Log			12							
			13							
			14							
			15							

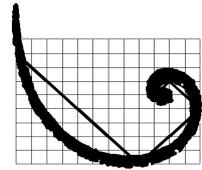
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>3.5</b>	Final Water Level (m bgl): <b>4.18</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>250</b>	Elevation (Ground): <b>179.97</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.9</b>
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306708.012</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413880.163</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.6</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Topsoil, clay (reworked), brown, dry, minor gravel inclusions, no odour, no staining  <b>Shale</b> Brown, light grey, dry, hard, laminated, some weathering, no odour, no staining. Wet from 1.6m bgl			0		DS	N		0	BV_MW07_0.1	
<b>Shale</b> Grey, wet.			3							
End of Log			4							
			5							

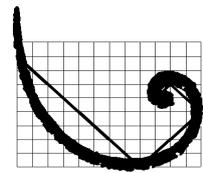
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>12</b>	Final Water Level (m bgl): <b>5.485</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.16</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.05</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307432.851</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413863.902</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9.2</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravelly sandy clay, moist, medium stiff, non-plastic, no odour or staining, Weathered shale and ironstone throughout			0		DS	N		0	BV_MW08_0.2	
			0.2					0.2		
<b>Fill</b> Grey with shale cobbles			1					0.2		
<b>Fill</b> Gravelly clay, dark brown to brown with orange mottles, fine to coarse gravels and cobbles			2					0.2		
			3					0.2		
			4					0.2		
			5		US	N		0.2	BV_MW08_5.0	

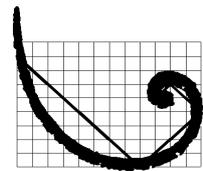
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>12</b>	Final Water Level (m bgl): <b>5.485</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.16</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.05</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307432.851</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413863.902</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9.2</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6						BV_MW08_3.0	
<b>Sandstone</b> Orange-brown, moist, medium plasticity, firm, dense			7							
			8							
<b>Silty Clay</b> Orange-brown, moist to very moist, soft, high plasticity, minor gravel, no odour			9							
<b>clay</b> Brown, dry, minor gravel, medium dense, no odour			10							

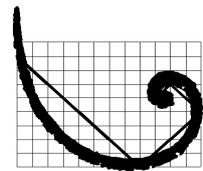
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>12</b>	Final Water Level (m bgl): <b>5.485</b>
Drill Finish Date: <b>21/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.16</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.05</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307432.851</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413863.902</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9.2</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Silty Clay</b> Orange-brown, saturated, high plasticity, soft, no odour, no staining			11							
End of Log			12							
			13							
			14							
			15							

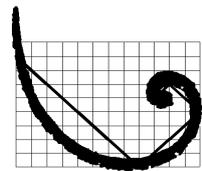
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Log By: **SM/AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>10.3</b>	Final Water Level (m bgl): <b>4.035</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.79</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307532.012</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413833.563</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b>			0					0.1		
<b>Gravel</b> Road base, red-brown, wet, no odour, no staining			0.1					0.1	BV_MW09_0.5	
<b>Fill</b> Clayey Gravel, grey-brown, moist, fine-coarse gravels/shale, medium-dense, no odour, no staining			0.5		DS	N		0.1		
			1					0.1		
			1.5					0.1		
			2		US	N		0.2	BV_MW09_2.0	
			2.5					0.1		
			3					0.1		
			3.5					0.1		
			4					0.1		
			4.5					0.1		
			5					0.1		

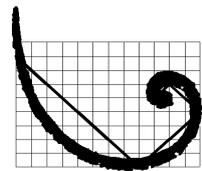
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>10.3</b>	Final Water Level (m bgl): <b>4.035</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.79</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307532.012</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413833.563</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
<b>Clayey Gravel</b> Very dense, layer of bedrock			7							
<b>Clayey Gravel</b> Very moist			8							
<b>Silty Clay</b> Brown, wet, soft, no odour			9							
			10							

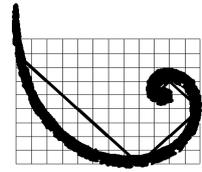
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>10.3</b>	Final Water Level (m bgl): <b>4.035</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>179.91</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.79</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307532.012</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413833.563</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
End of Log			11 12 13 14 15							

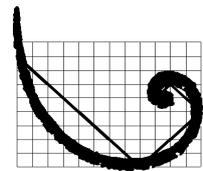
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Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW10**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>8.5</b>	Final Water Level (m bgl): <b>1.57</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>177.79</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>177.64</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307629.466</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413812.445</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravel (road base), hard, compacted, blue metal, limestone and bitumen throughout			0		DS	N		0.1	BV_MW10_0.1	
<b>Fill</b> Sandy gravel, pale yellow, dry, dense, fine to coarse, poorly sorted, no odour or staining. Crushed limestone road base			0.3					0.3		
<b>Gravelly Clay</b> Brown mottled orange and grey, moist, soft, low plasticity, no odour or staining, weathered shale fragments throughout			1					0.2		
			0.1					0.1		
<b>Clay</b> Grey mottled orange-brown, stiff, high plasticity, no odour or staining (weathered shale)			2					0.1		
			3					0		
			4					0		
<b>Shale</b> Highly weathered, orange-brown, fine grained, soft, fractured, very fine grained,			4					0		
			5		US	N		0.1	BV_MW10_4.9	

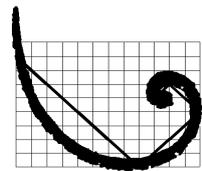
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW10**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>8.5</b>	Final Water Level (m bgl): <b>1.57</b>
Drill Finish Date: <b>22/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>177.79</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>177.64</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307629.466</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413812.445</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>6.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Silty Clay</b> Grey-brown, moist, soft, medium plasticity, no odour, no staining, completely weathered shale.			6							
			7							
			8							
End of Log			9							
			10							

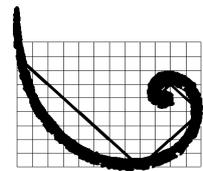
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Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW11**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>4</b>	Final Water Level (m bgl): <b>1.05</b>
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.05</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>179.98</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307287.991</b>
Drill Method: <b>NDD/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413553.386</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty clay, brown, moist, some plasticity, no odour, no staining			0		DS	N		0	BV_MW11_0.1	
<b>Fill</b> Reworked clay with crushed shale and sandstone gravel inclusions throughout, brown to light brown, moist to dry			0.1					0.1		
<b>Fill</b> Gravelly sand, dark grey, moist to dry, some minor clays, dense, no odour, no staining			1					0.2		
					US	N		0.1	BV_MW11_1.7	
<b>Gravelly Clay</b> Grey mottled red-brown, wet, soft, medium plasticity, no odour, no staining			2					0.1		
					US	N		0.1	BV_MW11_4.0	
End of Log			4					0.3		
			5							

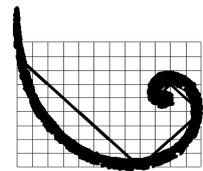
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW12**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>0.5</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.12</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.03</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307352.94</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413542.682</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, dark brown, moist, medium dense, fine grained, moderately sorted, no odour, no staining, rootlets throughout			0					0.1		
<b>Fill</b> Gravelly Clay, brown, mottled orange and grey, moist, soft, non-plastic, no odour or staining			0.1		DS	N		0.2	BV_MW12_0.5	
			1					0.1		
			1					0.1		
			2					0		
<b>Clay</b> Olive-brown, moist, soft, high plasticity, no odour or staining			2							
			3					0.1		
<b>Shale</b> Grey, mottled orange-brown, completely weathered (gravelly clay), moist, soft, low plasticity, no odour, no staining			3							
			4		US	N		0.1	BV_MW12_4.0	
			5					0.1		

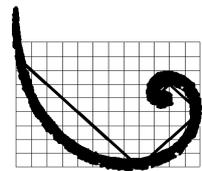
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW12**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>0.5</b>
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>125</b>	Elevation (Ground): <b>180.12</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.03</b>
Driller: <b>Wade Manger</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307352.94</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413542.682</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>1.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0		
End of Log			7							
			8							
			9							
			10							

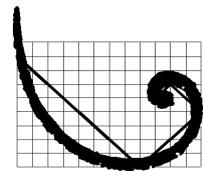
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_MW13**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>7.5</b>	Final Water Level (m bgl): <b>1.12</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.26</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.18</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307330.673</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413616.909</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Fill</b> Gravelly Clay, brown, moist, soft, low plasticity, no odour or staining. Weathered shale fragments throughout			0					0.2			
			0.2		DS	N		0.2	BV_MW13_0.5		
			1						0.2		
			3						0.1		
<b>Clay</b> With organic matter, dark brown, moist, soft, low plasticity, no odour, no staining			4					0.1			
			5					0			
<b>Clay</b> Brown, moist, soft, highly plastic, no stain, no odour.			5					0			

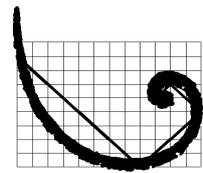
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TV**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BV\_MW13**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>7.5</b>	Final Water Level (m bgl): <b>1.12</b>
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>180.26</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>180.18</b>
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>307330.673</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Gatic</b>	Northing (MGA): <b>6413616.909</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>5.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Sandy Clay</b> Red mottled brown, moist, soft, low plasticity, no stain, no odour										
<b>Sandy Clay</b> Grey mottled red, wet			6		US	N		0	BV_MW13_6.0	
End of Log			8							
			9							
			10							

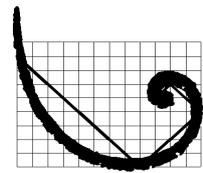
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TV**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>250</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306827</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414157</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Clay with some shale gravel, brown, moist, moderate plasticity, gravel is medium grained, angular, no odour, no staining			0		DS	N		0	BV_SB01_0.5	
<b>Clay</b> Natural, brown mottled red and grey, moist, moderate plasticity, no odour, no staining			1					0		
End of Log			2					0		
End of Log			3		US	Y			BV_SB01_2.9	
End of Log			4							
End of Log			5							

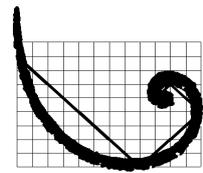
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>13/11/2013</b>	Total Depth (m): <b>2.6</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>250</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306877</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414187</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks	
Ground Surface			0								
<b>Fill</b> Clay, brown mottled red, moist, plastic, some rootlet inclusions, no odour, no staining. Angular to coarse grained ironstone gravel inclusions from 0.4 m bgl			0		DS	N		0.1	BV_SB02_0.1		
					DS	N		0.1	BV_SB02_0.5		
			1						0.1		
									0.3		
<b>Shale</b> Grey, dry, no stain, no odour			2					0			
<b>Sandy Clay</b> Brown mottled red and grey, moist, soft, non-plastic, no stain, no odour					US	N		0	BV_SB02_2.5		
<b>Shale</b> Grey, dry, friable, no stain, no odour			3								
End of Log			4								
			5								

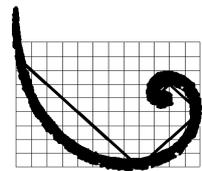
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>11/11/2013</b>	Total Depth (m): <b>1.2</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>19/11/2013</b>	Hole Diam. / Width (mm): <b>250</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306703</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414266</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Topsoil, silty clay with fine to medium grained gravel, dark brown, moist, no odour, no staining			0		DS	N		0.1	BV_SB03_0.1	
<b>Fill</b> Reworked clay with ironstone gravels, brown, moist to dry, gravel is angular, fine to coarse, no odour, no staining								0.1		
<b>Shale</b> Weathered, brown, dry to moist, more compact with depth, no odour, no staining					DS	Y		BV_SB03_1.1		
End of Log			1							
			2							
			3							
			4							
			5							

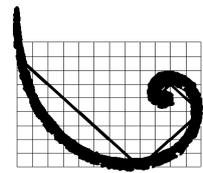
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **HC/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **11/11/2013** Total Depth (m): **3.9** Final Water Level (m bgl): -  
 Drill Finish Date: **19/11/2013** Hole Diam. / Width (mm): **100** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Eric Grima** Casing Diam. (mm): **N/A** Easting (MGA): **307096**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6414127**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Clayey Silt</b> Brown, dry, low plasticity, firm to dense, no staining, no odour  <b>Fill</b> Clayey gravel, orange-brown, dry, coarse to cobbled, angular, no staining, no odour			0		DS	N		0	BV_SB04_0.1	
			1					0		
			0.3					0.3		
<b>Fill</b> Gravelly clay, orange-brown, intermixed with pale grey, dry, medium plasticity, dense, reworked natural, no staining, no odour			2		US	N		0.2	BV_SB04_2.0	
			3					0.5		
End of Log			4							
			5							

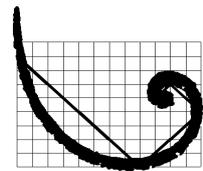
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **AM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB05**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>20/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307032</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413838</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining			0					0.1		
<b>Fill</b> Gravelly clay, grey-brown, moist, soft, non-plastic, no odour or staining, shale fragments throughout			0.2		DS	N		0.2	BV_SB05_0.5	
			1					0.1		
			2					0		
			3		US	Y		0	BV_SB05_2.9	
<b>Shale</b> Weathered, grey, moist, no stain, no odour			3							
End of Log			4							
			5							

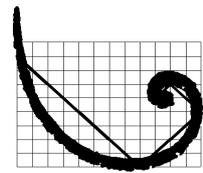
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB06**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>25/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307207</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413635</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, brown, moist, medium dense, fine grained, moderately sorted, no odour or staining			0		DS	N		0	BV_SB06_0.2	
<b>Fill</b> Clayey gravel, brown, moist, dense, fine to coarse, poorly sorted, rounded (river gravels), no odour, no staining. Concrete piece at 0.4 m bgl			0.2					0.2		
			1					0.1		
<b>Fill</b> Gravelly clay, brown, moist, soft, low plasticity, no odour or staining			0.2					0.2		
<b>Shale</b> Weathered, brown, moist, soft, friable, no odour, no staining			2					0		
			3		US	Y		0	BV_SB06_2.9	
End of Log			4							
			5							

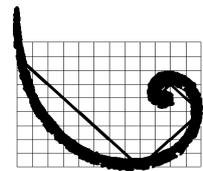
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB07**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>25/11/2013</b>	Total Depth (m): <b>3</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>26/11/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Adrian Jarvis</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307309</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6413661</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Concrete</b> Good condition, no staining					DS	N			BV_SB07_0.25	
<b>Fill</b> Gravelly sand, red-brown, moist, loose, medium to coarse, poorly sorted, no odour, no staining										
<b>Fill</b> Gravelly clay, grey-brown, moist, soft, low-plasticity, no odour, no staining, weathered shale and ironstone gravel throughout										
<b>Clay</b> With organic matter, dark brown, moist, soft, low plasticity, no odour, no staining								0		
<b>Clay</b> Brown, moist, soft, high plasticity, no odour, no staining										
<b>Sandy Clay</b> Red mottled grey, moist, soft, low plasticity, no odour, no staining					DS			0	BV_SB07_2.9	
End of Log			3							
			4							
			5							

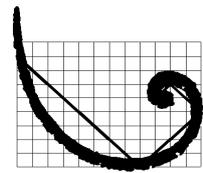
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB08**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **13/11/2013** Total Depth (m): **3.8** Final Water Level (m bgl): -  
 Drill Finish Date: **15/11/2013** Hole Diam. / Width (mm): **100** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Scott Jessup** Casing Diam. (mm): **N/A** Easting (MGA): **307725**  
 Drill Method: **NDD/PT** Surface Completion: **Backfilled** Northing (MGA): **6413802**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Gravelly sand, brown, moist, medium dense, fine to coarse, poorly sorted, no odour, no staining			0		DS	N		0.1	BV_SB08_0.1	
<b>Gravelly Clay</b> Red-brown, dry, hard, non-plastic, no odour, no staining, river cobbles to 0.5 m bgl			0.2					0.2		
<b>Silty clay</b> Red-brown, dry, hard, non-plastic, no odour, no staining			1					0.1		
<b>Sandstone</b> Extremely weathered, orange with pale grey mottling			2		US	N		0	BV_SB08_2.0	
<b>Sandstone</b> Increasing clay content (pale grey), slightly moist, dense, no staining, no odour			3					0		
<b>Sandstone</b> Orange-brown, slightly moist, very dense, fine sand, no odours no staining			4					0		
End of Log			5							

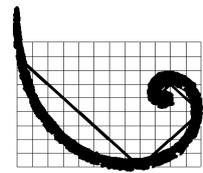
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BV\_SB09**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/11/2013</b>	Total Depth (m): <b>3.9</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>20/11/2013</b>	Hole Diam. / Width (mm): <b>100</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>307358</b>
Drill Method: <b>NDD/PT</b>	Surface Completion: <b>Backfilled</b>	Northing (MGA): <b>6414030</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Silty sand, brown, dry, loose, fine grained, moderate to well sorted, no odour, no staining. Rootlets to 0.3 m bgl  <b>Fill</b> Gravelly clay, brown, dry, stiff, non-plastic, no odour, no staining, rootlets, weathered shale and ironstone fragments throughout, larger cobbles from 0.7 m bgl (to 60 mm)			0		DS	N		0.2	BV_SB09_0.1	
			1					0.2		
			1					0.1		
			1					0.1		
			2		US	N		0.1	BV_SB09_2.0	
			3					0		
<b>Fill</b> Gravel, grey, dry, coarse, angular  <b>Fill</b> Clay, orange-brown, mottled red-brown, slightly moist, no odour, large cobbles of shale			3							
			4							
End of Log			4							
			5							

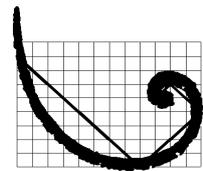
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BX\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>9.435</b>
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>199.28</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>200.19</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306527.736</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413510.125</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Clay</b> Red-brown, moist, medium stiff, non-plastic, no odour, no staining			0					0		
<b>Shale</b> Fine grained, well sorted, highly weathered, soft, grey with orange-brown weathering evident					DS	N		0.1	BX_MW01_0.5	
<b>Sandy Clay</b> Grey, mottled orange, moist, non-plastic, no stain no odour, trace gravel			1					0.1		
<b>Sandy Clay</b> Brown, dry, non-plastic, no stain, no odour			2							
			3							
			4							
			5							

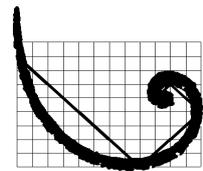
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: SM/TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BX\_MW01**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>9.435</b>
Drill Finish Date: <b>5/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>199.28</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>200.19</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306527.736</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413510.125</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>9</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
<b>Shale</b> Weathered, brown, dry, no stain, no odour	[Hatched pattern]	[Solid black]	0							
<b>Siltstone</b> Grey, dry, fine grained, no stain, no odour.	[Dotted pattern]	[Diagonal lines]	6							
<b>Sandstone</b> Brown, dry	[Dotted pattern]	[Diagonal lines]	7							
<b>Siltstone</b> Grey, dry	[Dotted pattern]	[Diagonal lines]	8							
			9							
			10							

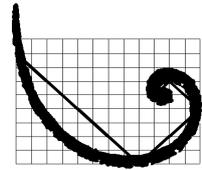
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BX\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306661</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfill</b>	Northing (MGA): <b>6413310</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Clay</b> Red-brown, moist, soft, low-plasticity, no odour or staining					DS	N		0	BX_MW02_0.5	
<b>Shale</b> Weathered, brown, dry, no stain, no odour			1							
			2							
			3							
			4							
<b>Siltstone</b> Grey, dry, fine grained, no odour			5							

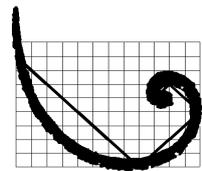
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BX\_MW02**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>26/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>6/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>306661</b>
Drill Method: <b>NDD/PT/AH</b>	Surface Completion: <b>Backfill</b>	Northing (MGA): <b>6413310</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
			7							
			8							
			9							
			10							

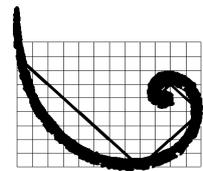
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Log By: **SM/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BX\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>3.79</b>
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>192.67</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>193.26</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306958.184</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413443.449</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Dark brown, moist, soft, no stain, no odour			0		DS	N		0	BX_MW03_0.2	
<b>Sandy Clay</b> Dark brown, soft, non-plastic, no stain, no odour, trace gravel			1					0		
<b>Gravelly Clay</b> Brown, moist, soft, non-plastic, no stain, no odour, fine to medium gravel			2					0		
<b>Clay</b> With weathered shale, grey-brown, dry, soft, non-plastic, no stain, no odour			5		US	N		0	BX_MW03_2.0	

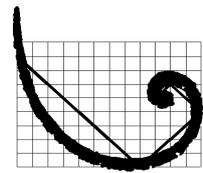
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: TC

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BX\_MW03**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>6</b>	Final Water Level (m bgl): <b>3.79</b>
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>192.67</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>193.26</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>306958.184</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6413443.449</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>4.5</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
End of Log			7							
			8							
			9							
			10							

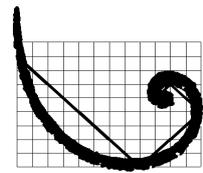
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BX\_MW04**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: **26/11/2013** Total Depth (m): **0.4** Final Water Level (m bgl): -  
 Drill Finish Date: **26/11/2013** Hole Diam. / Width (mm): **150** Elevation (Ground): -  
 Drill Co: **Numac** Casing Type: **N/A** Elevation (Case): -  
 Driller: **Scott Jessup** Casing Diam. (mm): **N/A** Easting (MGA): **306738**  
 Drill Method: **NDD** Surface Completion: **Backfill** Northing (MGA): **6413614**  
 Hole Type: **Soil Bore** Water Strike (m bgl): -

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Bitumen</b> Good condition, no staining.					DS	N		0.1	BX_MW04_0.15	
<b>Fill</b> Gravelly sand, pale grey, dry, loose, fine to coarse, poorly sorted, no odour, no staining.										
<b>Fill</b> Siltstone boulder, dark grey, hard.										
End of Log			1							
			2							
			3							
			4							
			5							

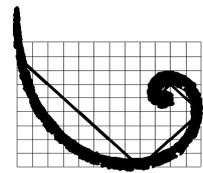
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **SM**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BY\_MW11**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>0.9</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>9/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>303482</b>
Drill Method: <b>HA</b>	Surface Completion: <b>Backfill</b>	Northing (MGA): <b>6407220</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Silty Sand</b> Gravel, brown, moist, medium density, fine grained sand - pebbles, mud sorted homogenous, no odour, no staining.					DS	N		0.1	BY_MW11_0.2	
<b>Sandy Clay</b> Gravel with weathered siltstone gravel inclusions, brown, moist, low plasticity, homogenous, no odour, no staining.								0.2		
End of Log			1							
			2							
			3							
			4							
			5							

**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

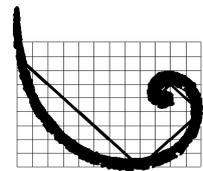
Log By: **GD**

Checked By: \_\_\_\_\_



Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BY\_MW12**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>9/12/2013</b>	Total Depth (m): <b>9</b>	Final Water Level (m bgl): <b>3.9</b>
Drill Finish Date: <b>10/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>128.09</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>128.73</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>304071.6</b>
Drill Method: <b>HA/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6407884.89</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6					0		
			7					0		
			8		DS	N		0	BY_MW12_8.0	
End of Log			9							
			10							

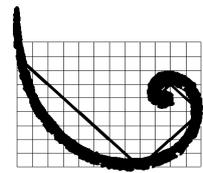
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **GP/TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BY\_MW18**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/12/2013</b>	Total Depth (m): <b>1.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309842</b>
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfill</b>	Northing (MGA): <b>6412257</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Fill</b> Road base, clayey gravel, light brown, dry, dense, fine to coarse, well sorted, no odour, no staining.			0		DS	Y		0	BY_MW18_0.2	
								0		
<b>Fill</b> Sandy clay with gravel, grey, moist, soft, non plastic, no odour, no staining.			1					0		
								0		
End of Log			2							
			3							
			4							
			5		US	Y			BY_MW18_5.0	

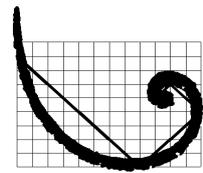
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BY\_MW20**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>3/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>308873</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfill</b>	Northing (MGA): <b>6414115</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Brown, dry, medium stiff, non-plastic, no stain, no odour			0		DS	N		0	BY_MW20_0.2	
<b>Sandy Clay</b> Brown, dry, medium stiff, low plasticity, no stain, no odour			0					0		
			1					0		
<b>Shale</b> Grey, brown, dry, friable, no stain, no odour			2		US	N		0	BY_MW20_2.0	
			3							
			4							
			5							

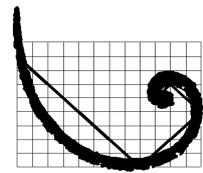
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BY\_MW20**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>3/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>308873</b>
Drill Method: <b>NDD/PT/SFA/AH</b>	Surface Completion: <b>Backfill</b>	Northing (MGA): <b>6414115</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
<b>Siltstone</b> Grey, dry, fine grained, no stain, no odour.			7							
			8							
			9							
			10							

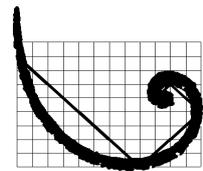
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

ID: **BY\_MW21**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>7.63</b>
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>145.12</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>145.99</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308231.435</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414617.227</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Brown, moist, soft, no stain, no odour			0		DS	N		0	BY_MW21_0.2	
<b>Sandy Clay</b> Red-brown, moist, stiff, non-plastic, no stain, no odour. Grey mottled brown, soft at 1.2 m bgl			0					0		
			1					0		
			2					0		
			2.5		US	N		0	BY_MW21_2.5	
			3							
			4							
			5							

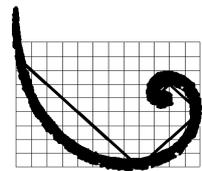
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BY\_MW21**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>14/11/2013</b>	Total Depth (m): <b>10</b>	Final Water Level (m bgl): <b>7.63</b>
Drill Finish Date: <b>4/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): <b>145.12</b>
Drill Co: <b>Numac</b>	Casing Type: <b>PVC</b>	Elevation (Case): <b>145.99</b>
Driller: <b>Eric Grima</b>	Casing Diam. (mm): <b>50</b>	Easting (MGA): <b>308231.435</b>
Drill Method: <b>NDD/PT/SFA</b>	Surface Completion: <b>Monument</b>	Northing (MGA): <b>6414617.227</b>
Hole Type: <b>Monitoring Well</b>	Water Strike (m bgl): <b>8</b>	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
			6							
<b>Sandy Clay</b> Brown, dry, non-plastic, no stain, no odour			7							
			8							
			9							
<b>Shale</b> Weathered, brown, dry, no stain, no odour			10							

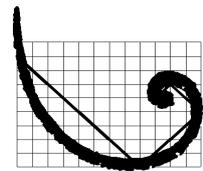
**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Client: **Macquarie Generation**  
 Project No.: **0224193**  
 Project Name: **Project Symphony - Bayswater**  
 Site Name: **Bayswater Power Station**  
 Site Address: **New England Highway, Muswellbrook, NSW**

**ID: BY\_MW32**



**ERM**

**ERM Australia Pty Ltd**

Drill Start Date: <b>12/12/2013</b>	Total Depth (m): <b>1.5</b>	Final Water Level (m bgl): -
Drill Finish Date: <b>12/12/2013</b>	Hole Diam. / Width (mm): <b>150</b>	Elevation (Ground): -
Drill Co: <b>Numac</b>	Casing Type: <b>N/A</b>	Elevation (Case): -
Driller: <b>Scott Jessup</b>	Casing Diam. (mm): <b>N/A</b>	Easting (MGA): <b>309778</b>
Drill Method: <b>NDD</b>	Surface Completion: <b>Backfill</b>	Northing (MGA): <b>6413823</b>
Hole Type: <b>Soil Bore</b>	Water Strike (m bgl): -	

Lithology	Symbol	Well	Depth (m)	Recovery	Sample Type	Analysed	PPT (kPa)	PID (ppm)	Sample Details	Remarks
Ground Surface			0							
<b>Sandy Silt</b> Dark brown, moist, soft, no odour, no staining.			0		DS	N		0	BY_MW32_0.2	
<b>Sandy Clay</b> Gravel increasing from 1.2 m bgl, brown, moist, medium dense, low plastic, no odour, no staining.			1					0		
								0.1		
<b>Shale</b> Weathered, brown, dry, no odour, no staining.					US	Y		0	BY_MW32_1.5-1.8	
End of Log			2							
			3							
			4							
			5							

**NOTE:** This bore log is for environmental purposes only and is not intended to provide geotechnical information.

Log By: **TC**

Checked By: \_\_\_\_\_

Annex E

## Field Documentation

**Oil / Water Interface Meter****airmet**
 Air-Met Scientific Pty Ltd  
 1300 137 067

**Instrument**      **Geotech Interface Meter (30M)**  
**Serial No.**      **3983**

Item	Test	Pass	Comments
<b>Battery</b>	Compartment	✓	
	Capacity	✓	
<b>Probe</b>	Cleaned/Decon.	✓	
	Operation	✓	
<b>Connectors</b>	Condition	✓	
		✓	
<b>Tape Check</b>	Cleaned	✓	
<b>Connectors</b>	Checked for cuts	✓	
<b>Instrument Test</b>	At surface level	✓	

**Certificate of Calibration**

This is to certify that the above instrument has been cleaned and tested.

**Calibrated by:**
**Sophie Boler****Calibration date:**

24/10/2013

**Next calibration due:**

23/12/2013

**Oil / Water Interface Meter****airmet**

Air-Met Scientific Pty Ltd  
1300 137 067

Instrument      Geotech Interface Meter (30M)  
Serial No.      3978

Item	Test	Pass	Comments
<b>Battery</b>	Compartment	✓	
	Capacity	✓	
<b>Probe</b>	Cleaned/Decon.	✓	
	Operation	✓	
<b>Connectors</b>	Condition	✓	
		✓	
<b>Tape Check</b>	Cleaned	✓	
<b>Connectors</b>	Checked for cuts	✓	
<b>Instrument Test</b>	At surface level	✓	

**Certificate of Calibration**

This is to certify that the above instrument has been cleaned and tested.

**Calibrated by:**

Sophie Boler

**Calibration date:**

25/10/2013

**Next calibration due:**

24/12/2013

**Oil / Water Interface Meter****airmet**

Air-Met Scientific Pty Ltd  
1300 137 067

Instrument      Interface Meter (50M)  
Serial No.      122 009747-1

Item	Test	Pass	Comments
Battery	Compartment	✓	
	Capacity	✓	
Probe	Cleaned/Decon.	✓	
	Operation	✓	
Connectors	Condition	✓	
		✓	
Tape Check	Cleaned	✓	
	Checked for cuts	✓	
Instrument Test	At surface level	✓	

**Certificate of Calibration**

This is to certify that the above instrument has been cleaned and tested.

**Calibrated by:**

Sophie Boler

**Calibration date:**

26/11/2013

**Next calibration due:**

25/01/2014

## PID Calibration Certificate

Instrument      PhoCheck Tiger  
Serial No.      T-105859



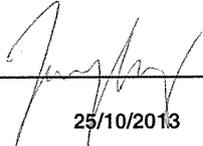
Air-Met Scientific Pty Ltd  
1300 137 067

Item	Test	Pass	Comments			
<b>Battery</b>	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
<b>Switch/keypad</b>	Operation	✓				
<b>Display</b>	Intensity	✓				
	Operation (segments)	✓				
<b>Grill Filter</b>	Condition	✓				
	Seal	✓				
<b>Pump</b>	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
<b>PCB</b>	Condition	✓				
<b>Connectors</b>	Condition	✓				
<b>Sensor</b>	PID	✓	10.6 ev			
<b>Alarms</b>	Beeper	✓	<b>Low</b>	<b>High</b>	<b>TWA</b>	<b>STEL</b>
	Settings	✓	50ppm	100ppm		
<b>Software</b>	Version	✓				
<b>Data logger</b>	Operation	✓				
<b>Download</b>	Operation	✓				
<b>Other tests:</b>						

### Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
PID Lamp		100ppm Isobutylene	NIST	SY21	100.6ppm

Calibrated by:  Joanna Wong

Calibration date: 25/10/2013

Next calibration due: 24/11/2013

## PID Calibration Certificate

Instrument      PhoCheck Tiger  
Serial No.      T-105517



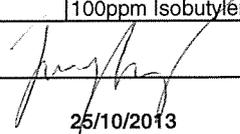
Air-Met Scientific Pty Ltd  
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

### Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
PID Lamp		100ppm Isobutylene	NIST	SY21	100.3ppm

Calibrated by:  Joanna Wong

Calibration date: 25/10/2013

Next calibration due: 24/11/2013

## PID Calibration Certificate

Instrument      PhoCheck Tiger  
Serial No.      T-105901



Air-Met Scientific Pty Ltd  
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation					
Other tests:						

### Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode      Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
PID Lamp		100ppm Isobutylene	NIST	SY21	100.5ppm

Calibrated by: SB      Sophie Boler

Calibration date:      4/11/2013

Next calibration due:      4/12/2013



ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Boys note

Project Staff :

A. Morris

Project No :

0224193

Date :

5-11-13

### Photo-ionisation Detector

Make/Model No:

Serial Number:

### Calibration Gas

Calibration Gas:

100 Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

~~100~~ 0

#### Span Calibration

Desired PID Reading:

100

Actual PID Reading:

100

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

A. Morris

Signature:

Date:

5-11-13



**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name : Symphony - Bayswater Project Staff : S. Mulligan  
Project No : 0213879 Date : 5/11/13

**Photo-ionisation Detector**

Make/Model No: Procheck Tiger  
Serial Number: T-105517

**Calibration Gas**

Calibration Gas: Isobutylene

**PID Calibration**

Zero Calibration

PID Reading: 0.0

Span Calibration

Desired PID Reading: 100.0  
Actual PID Reading: 100.0

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By: Stephen Mulligan

Signature:		Date:	<u>5/11/13</u>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Symphony - Bayswater

Project Staff :

S. Mulligan

Project No :

0213879

Date :

6/11/13

### Photo-ionisation Detector

Make/Model No:

Procheck Tiger

Serial Number:

T-105517

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0-0

#### Span Calibration

Desired PID Reading:

100.0

Actual PID Reading:

100.0

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Stephen Mulligan

Signature:

Date:

6/11/13



ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="Andrew Morris"/>	Date:	<input type="text" value="6/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :

Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="7/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Symphony - Bayswater

Project Staff :

S. Mulligan

Project No :

0224193

Date :

7/11/13

### Photo-ionisation Detector

Make/Model No:

Procheck Tiger

Serial Number:

T-105517

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0.0

#### Span Calibration

Desired PID Reading:

100.0

Actual PID Reading:

100.0

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

S. Mulligan

Signature:

Date:

7/11/13



ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Symphony - Bayswater

Project Staff :

S. Mulligan

Project No :

0224193

Date :

8/11/13

### Photo-ionisation Detector

Make/Model No:

Procheck Tiger

Serial Number:

T-105517

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0.0

#### Span Calibration

Desired PID Reading:

100.0

Actual PID Reading:

100.0

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Stephen Mulligan

Signature:

Date:

8/11/13



ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Project Symphony

Project Staff :

A. Morris

Project No :

0224193

Date :

8/11/13

### Photo-ionisation Detector

Make/Model No:

Proheck Tiger

Serial Number:

T-105901

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0-0

#### Span Calibration

Desired PID Reading:

100

Actual PID Reading:

100

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Andrew Morris

Signature:

Date:

8/11/13

## PID Calibration Certificate

Instrument      Minirae 3000  
Serial No.      592-001359



Air-Met Scientific Pty Ltd  
1300 137 067

Item	Test	Pass	Comments			
<b>Battery</b>	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
<b>Switch/keypad</b>	Operation	✓				
<b>Display</b>	Intensity	✓				
	Operation (segments)	✓				
<b>Grill Filter</b>	Condition	✓				
	Seal	✓				
<b>Pump</b>	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
<b>PCB</b>	Condition	✓				
<b>Connectors</b>	Condition	✓				
<b>Sensor</b>	PID	✓	10.6 ev			
<b>Alarms</b>	Beeper	✓	<b>Low</b>	<b>High</b>	<b>TWA</b>	<b>STEL</b>
	Settings	✓	50ppm	100ppm	10ppm	25ppm
<b>Software</b>	Version	✓				
<b>Data logger</b>	Operation	✓				
<b>Download</b>	Operation	✓				
<b>Other tests:</b>						

### Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
PID Lamp		100ppm Isobutylene	NIST	SY21	100.0ppm

**Calibrated by:**  Anne Rutlidge

**Calibration date:** 8/11/2013

**Next calibration due:** 7/05/2014



ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Project Symphony - Baywater

Project Staff :

S. Mulligan

Project No :

0224193

Date :

11/11/13

### Photo-ionisation Detector

Make/Model No:

Procheck Tiger

Serial Number:

T-105517

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0.0

#### Span Calibration

Desired PID Reading:

100.0

Actual PID Reading:

100.0

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Stephen Mulligan

Signature:

Date:

11/11/13



**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :

Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	11/11/13
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Symphony - Bayswater

Project Staff :

S. Mulligan

Project No :

0224193

Date :

12/11/13

### Photo-ionisation Detector

Make/Model No:

Procheck Tiger

Serial Number:

T-105517

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0.0

#### Span Calibration

Desired PID Reading:

100.0

Actual PID Reading:

100.0

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Stephen Mulligan

Signature:

Date:

12/11/13



**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="A. Morris"/>	Date:	<input type="text" value="12/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="SM"/>	Date:	<input type="text" value="13/11/13"/>
------------	---------------------------------	-------	---------------------------------------

## PID Calibration Certificate



Instrument      PhoCheck Tiger  
Serial No.      T-106368

Air-Met Scientific Pty Ltd  
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

### Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
PID Lamp		100ppm Isobutylene	NIST	SY21	99.7ppm

Calibrated by: AR Anne Rutlidge

Calibration date: 13/11/2013

Next calibration due: 13/12/2013

## PID Calibration Certificate



Instrument      PhoCheck Tiger Select  
Serial No.      T-106085

Air-Met Scientific Pty Ltd  
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.0 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

### Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Diffusion mode      Aspirated mode

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
PID Lamp		100ppm	NIST	SY21	100.0ppm

Calibrated by: AR Anne Rutlidge

Calibration date: 13/11/2013

Next calibration due: 13/12/2013



**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="A. Moore"/>	Date:	<input type="text" value="13/11/15"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="Stephen Mulligan"/>	Date:	<input type="text" value="14/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	14/11/13
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="15/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	15/11/13
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="18/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

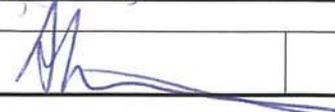
Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="19/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Callbration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="19/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="TC"/>	Date:	<input type="text" value="19/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="20/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="Stephen Mulligan"/>	Date:	<input type="text" value="20/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="20/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="21/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	21/11/13
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="TC"/>	Date:	<input type="text" value="21/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:			Date:	
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="22/11/2013"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	22/11/13
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="22/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="25/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :

Project No :  Date :

### Photo-ionisation Detector

Make/Model No:

Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:

Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="H Campbell"/>	Date:	<input type="text" value="25/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	25/11/2013
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :

Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:

Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="Stephen Mulligan"/>	Date:	<input type="text" value="26/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :

Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	26/11/2013
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="H. Campbell"/>	Date:	<input type="text" value="26-11-13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :

Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="Stephen Mulligan"/>	Date:	<input type="text" value="27/11/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="27-11-13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Macon Baywater

Project Staff :

HC

Project No :

0224193

Date :

28-11-13

### Photo-ionisation Detector

Make/Model No:

MiniRoc 3000

Serial Number:

592-001359

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0.0 ppm

#### Span Calibration

Desired PID Reading:

100.0 ppm

Actual PID Reading:

100.0 ppm

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

H. CAMPBELL

Signature:

Date:

28-11-13



ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:

Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="Stephen Mulligan"/>	Date:	<input type="text" value="28/11/13"/>
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :

Project No :  Date :

### Photo-ionisation Detector

Make/Model No:

Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:

Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	28/11/2013
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :  Project Staff :   
Project No :  Date :

### Photo-ionisation Detector

Make/Model No:   
Serial Number:

### Calibration Gas

Calibration Gas:

### PID Calibration

#### Zero Calibration

PID Reading:

#### Span Calibration

Desired PID Reading:   
Actual PID Reading:

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="Hanna"/>	Date:	<input type="text" value="29-11-13"/>
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## PID Calibration Certificate

Instrument      PhoCheck Tiger  
Serial No.      T-105431



Air-Met Scientific Pty Ltd  
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm	N/A	N/A
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

### Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No		Instrument Reading
PID Lamp		100ppm Isobutylene	NIST	SY21		100.6ppm

Calibrated by: AR Anne Rutlidge

Calibration date: 3/12/2013

Next calibration due: 2/01/2014



ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Macquarie Baywater

Project Staff :

HC

Project No :

0224193

Date :

2-12-13

### Photo-ionisation Detector

Make/Model No:

Minirae 300

Serial Number:

592 001359

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0.0 ppm

#### Span Calibration

Desired PID Reading:

100.0 ppm

Actual PID Reading:

99.9 ppm

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

W. CAMPBELL

Signature:

Date:

2-12-13



**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="3/12/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="Ayer"/>	Date:	<input type="text" value="4-12-13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value="S. Marshall"/>	Date:	<input type="text" value="5/12/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :

Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	5/12/13
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :

Symphony - Bayswater

Project Staff :

CA

Project No :

0024193

Date :

6/12/13

**Photo-ionisation Detector**

Make/Model No:

Pho Check TIGER

Serial Number:

T105901

**Calibration Gas**

Calibration Gas:

Isobutylene

**PID Calibration**

Zero Calibration

PID Reading:

0.0ppm

Span Calibration

Desired PID Reading:

100ppm

Actual PID Reading:

100.0ppm

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

GD

Signature:		Date:	6/12/13
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ERM

# Environmental Resources Management Australia Pty Ltd

## PID Calibration Certificate

Project Name :

Project Symphony

Project Staff :

HC / NH

Project No :

0224193

Date :

9-12-13

### Photo-ionisation Detector

Make/Model No:

Munroe 30000

Serial Number:

592-001359

### Calibration Gas

Calibration Gas:

Isobutylene

### PID Calibration

#### Zero Calibration

PID Reading:

0.0 ppm

#### Span Calibration

Desired PID Reading:

100.0 ppm

Actual PID Reading:

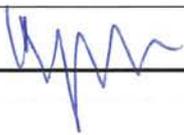
100.0 ppm

### Certification

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

HARVEST CAMPBELL

Signature:		Date:	9-12-13
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

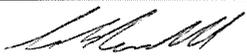
Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="9/12/13"/>
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## PID Calibration Certificate

Instrument      PhoCheck Tiger  
Serial No.      T-105524



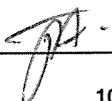
Air-Met Scientific Pty Ltd  
1300 137 067

Item	Test	Pass	Comments			
Battery	Charge Condition	✓				
	Fuses	✓				
	Capacity	✓				
	Recharge OK?	✓				
Switch/keypad	Operation	✓				
Display	Intensity	✓				
	Operation (segments)	✓				
Grill Filter	Condition	✓				
	Seal	✓				
Pump	Operation	✓				
	Filter	✓				
	Flow	✓				
	Valves, Diaphragm	✓				
PCB	Condition	✓				
Connectors	Condition	✓				
Sensor	PID	✓	10.6 ev			
Alarms	Beeper	✓	Low	High	TWA	STEL
	Settings	✓	50ppm	100ppm		
Software	Version	✓				
Data logger	Operation	✓				
Download	Operation	✓				
Other tests:						

### Certificate of Calibration

This is to certify that the above instrument has been calibrated to the following specifications:

Sensor	Serial no	Calibration gas and concentration	Certified	Gas bottle No	Instrument Reading
PID Lamp		100ppm Isobutylene	NIST	SY21	100.6ppm

Calibrated by:  Jacob Arnott

Calibration date: 10/12/2013

Next calibration due: 9/01/2014



**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	<input type="text" value="10/12/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:	<input type="text" value=""/>	<input type="text" value=""/>	Date:	<input type="text" value="11/12/13"/>
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**Environmental Resources Management Australia Pty Ltd**  
*PID Calibration Certificate*

Project Name :  Project Staff :   
Project No :  Date :

**Photo-ionisation Detector**

Make/Model No:   
Serial Number:

**Calibration Gas**

Calibration Gas:

**PID Calibration**

Zero Calibration

PID Reading:

Span Calibration

Desired PID Reading:   
Actual PID Reading:

**Certification**

The above detector has been calibrated in accordance with the manufacturers specifications.

Checked By:

Signature:		Date:	12/12/13
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# Groundwater - Well Sampling Data Form

Job Information	
Date: <u>6/12/13</u>	Time: arrive <u>07:25</u> depart _____
Project Name: <u>Symphony</u>	Project Number: <u>0224193</u>
Site Location: <u>Bayswater</u>	Sampler: <u>N.H</u>
Well ID: <u>BA-MW01</u>	Weather: <u>Fine, windy</u>

Equipment	
Water quality equipment description: <u>NA</u>	Interface probe number: <u>81D 3954</u>
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u>
	Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> <u>Other:</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	<b>Volume of water in well / V</b> = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column <u>9.560</u> m (-) <u>5.365</u> m (=) <u>4.195</u> m									
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume <u>4.195</u> m (x) <u>1.96</u> (=) <u>8.22</u> L									
Depth to product: _____ m		Product Thickness: _____ m		Verified with Bailer: <input type="checkbox"/> Y <input type="checkbox"/> N					

Water Quality Parameters									
Beginning purge time: <u>07:45</u>					Ending purge time: _____				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
20	07:50							brown, very turbid, no odour. Actively recharging as pumping	
40	07:55							as above	
60	08:00							as above	
80	08:05							as above	
100	08:05							becoming less turbid. Actively recharging as pumping	
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	
<u>100</u>	<b>Total Well Volume</b> Actual amount of water prior to sampling			Sample time _____ Containers used _____					
	<b>Flow rate</b> mL/minute			Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA			Was the well dry purged? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N		

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Job Information	
Date: 5/12/13	Time: arrive 16:30 depart
Project Name: Symphony	Project Number: 024193
Site Location: Bayswater	Sampler: N.H
Well ID: BA-MW03	Weather: overcast, windy

Equipment	
Water quality equipment description:	Interface probe number:
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column 5.930 m (-) 1.160 m (=) 4.77 m									
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume 4.77 m (x) 1.96 (=) 9.35 L									
Depth to product: _____ m      Product Thickness: _____ m      Verified with Bailer: <input type="checkbox"/> Y <input type="checkbox"/> N									

Water Quality Parameters									
Beginning purge time:					Ending purge time:				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
20	16:25							Drawn black very turbid. No odour. Well actively recharging as pumping	
40	16:40							As above.	
60	16:45							As above	
80	16:50							Becoming clearer after 65L. No odour	
90	16:55							Clear after 80L. No odour. Actively recharging	
								Developed	
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	
90	<b>Total Well Volume</b> Actual amount of water prior to sampling				Sample time _____ Containers used _____				
	<b>Flow rate</b> mL/minute				Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA		Was the well dry purged? <input type="checkbox"/> Y <input checked="" type="checkbox"/> N		

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Job Information	
Date: <u>29.11.13</u>	Time: arrive <u>1050</u> depart <u>1130</u>
Project Name: <u>for Symphony</u>	Project Number:
Site Location: <u>Dayswater</u>	Sampler: <u>J.G</u>
Well ID: <u>BB MW01</u>	Weather: <u>Rain</u>

Equipment	
Water quality equipment description:	Interface probe number: <u>NSW 2254 30m</u>
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u> Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> Other: <u>Monsoon</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	<b>Volume of water in well / V</b> = $\pi r^2 \times h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column <u>5.530</u> m (-) <u>2.290</u> m (=) <u>3.24</u> m Water Column (x) Conversion Factor (=) Litres per 1 Well Volume <u>3.24</u> m (x) <u>1.96</u> (=) <u>~6.5</u> L Depth to product: <u>  /  </u> m    Product Thickness: <u>  /  </u> m    Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N									

Water Quality Parameters									
Beginning purge time: <u>1100</u>		Ending purge time: <u>1115</u>							
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
								<u>light brown very turbid + 2</u> <u>turbid No odour</u> <u>dry @ 15</u> <u>-17</u> <u>-18</u>	
*pH, temp, cond readings not necessary if well is purged dry							<b>Example Comments:</b> clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		
<u>18</u>		<b>Total Well Volume</b> Actual amount of water prior to sampling			Sample time _____		Containers used _____		
Flow rate mL/minute		Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA			Was the well dry purged? <input type="checkbox"/> Y <input type="checkbox"/> N				

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Job Information	
Date: 27/11/13	Time: arrive 1210 depart 1255
Project Name: Symphony	Project Number:
Site Location: bagswater	Sampler: J. Grant
Well ID: BB-mw02	Weather: Rain

Equipment	
Water quality equipment description:	Interface probe number: NSW 4254 30m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic Submersible Micro-purge Amazon Other: <u>Monsoon</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	<b>Volume of water in well / V</b> = $\pi r^2 h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column <u>9.960</u> m (-) <u>4.550</u> m (=) <u>5.41</u> m Water Column (x) Conversion Factor (=) Litres per 1 Well Volume <u>5.41</u> m (x) <u>1.96</u> (=) <u>~ 10</u> L									
Depth to product: <u>  </u> m Product Thickness: <u>  </u> m Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N									

Water Quality Parameters									
Beginning purge time:					Ending purge time:				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
								turbid brown water - no odour	
								dry @ 302	
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	
30		<b>Total Well Volume</b> Actual amount of water prior to sampling			Sample time _____		Containers used _____		
		<b>Flow rate</b> mL/minute			Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA			Was the well dry purged? <input type="checkbox"/> Y <input type="checkbox"/> N	

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Job Information	
Date: <u>5/12/13</u>	Time: arrive <u>13:55</u> depart <u>14:35</u>
Project Name: <u>Symphony</u>	Project Number: <u>022419.3</u>
Site Location: <u>Bayswater</u>	Sampler: <u>N.H</u>
Well ID: <u>BB-MX103</u>	Weather: <u>overcast, windy</u>

Equipment	
Water quality equipment description: <u>NA</u>	Interface probe number: <u>540 &amp; 3954</u>
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u>
	Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> <u>Other:</u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	<b>Volume of water in well / V</b> = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	<u>1.96</u>	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column <u>7.035</u> m (-) <u>5.115</u> m (=) <u>1.92</u> m Water Column (x) Conversion Factor (=) Litres per 1 Well Volume <u>1.92</u> m (x) <u>1.96</u> (=) <u>3.763</u> L Depth to product: <u>—</u> m Product Thickness: <u>—</u> m Verified with Bailer: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <u>NA</u>									

Water Quality Parameters									
Beginning purge time:					Ending purge time:				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
<u>20</u>	<u>14:05</u>							<u>brown to black, very turbid. No odour. well actively recharging as pumping.</u>	
<u>40</u>	<u>14:10</u>							<u>brown to black, turbid, becoming clearer after 35L</u>	
<u>60</u>	<u>14:15</u>							<u>cloudy to clear. No odour well actively recharging as pumping.</u>	
								<u>Developed</u>	
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	
<u>60</u>	<b>Total Well Volume</b> Actual amount of water prior to sampling			Sample time <u>—</u> Containers used <u>—</u>					
	<b>Flow rate</b> mL/minute			Did field parameters stabilise? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> NA			Was the well dry purged? <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N		

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID <u>—</u>
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID <u>—</u>



# Groundwater - Well Sampling Data Form

Job Information	
Date: 29.11.17	Time: arrive 1255 depart
Project Name: Symphony	Project Number:
Site Location: Bingsunter	Sampler: J. L. Hunt
Well ID: BB mwo4	Weather: Rain

Equipment	
Water quality equipment description:	Interface probe number: NSW 4254 30m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic Submersible Micro-purge Amazon Other: Monsoon

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column 10.005 m (-) 2 m (=) 8 m									
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume 8 m (x) 1.96 (=) 15.68 L									
Depth to product: 1 m Product Thickness: 1 m Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N									

Water Quality Parameters									
Beginning purge time:					Ending purge time:				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
								Turbid dark grey water to cloudy water. Potential 'oil blotches' in first 20% of water - No odour	
								Good recharge	
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	
100	Total Well Volume Actual amount of water prior to sampling				Sample time		Containers used		
	Flow rate mL/minute				Did field parameters stabilise?			Was the well dry purged?	

Field QC Checks				
Was pre-cleaning sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID _____
Rinsate blank collected?	Y	N		Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Well Development - Job Information	
Date: 5/12/13	Time: arrive 12:15 depart 13:10
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: N.H
Well ID: BB-MW05	Weather: Fine, windy

Equipment	
Water quality equipment description: NA	Interface probe number: 540 3954
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic Submersible Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column									
3.910 m (-) 1.545 m (=) 2.365 m									
Water Column (x) Conversion Factor (=) Litres per 1 Well Volume									
2.365 m (x) 1.96 (=) 4.635 L									
Depth to product: _____ m Product Thickness: _____ m Verified with Bailer: <input checked="" type="checkbox"/> Y <input checked="" type="checkbox"/> N NA.									

Water Quality Parameters									
Beginning purge time:					Ending purge time:				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
13	12:20							Brown, turbid, No odour. Purged dry after 13L. Allowed to recharge	
19	12:25							Brown, turbid, No odour. Purged dry after another 6L. Allowed to recharge	
25	12:28							Brown, turbid, No odour. Purged dry after another 6L. Allowed to recharge	
35	12:34							Brown, turbid, becoming clearer after ~30L. Purged dry after another 10L. Allowed to recharge	
45	12:39							Clear, no odour. Purged dry after another 10L. Developed.	
*pH, temp, cond readings not necessary if well is purged dry									
Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth									

45	<b>Total Well Volume</b> Actual amount of water prior to sampling	Sample time _____	Containers used _____
-	<b>Flow rate</b> mL/minute	Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input checked="" type="checkbox"/> NA	Was the well dry purged? <input checked="" type="checkbox"/> Y <input type="checkbox"/> N

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____





# Groundwater - Well Sampling Data Form

Job Information	
Date: 10/12/13	Time: arrive 12:00 depart
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: N.H
Well ID: BE_MW01	Weather: Fine, hot, windy

Equipment	
Water quality equipment description: NA	Interface probe number: SUD 3954
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $= Pr \times r \times h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
7.215 m	(-) 2.255 m	(=) 4.96 m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			4.96 m	(x) 1.96	(=) 9.73 L				
Depth to product:	m		Product Thickness:	m		Verified with Bailer:	<input type="checkbox"/> Y <input checked="" type="checkbox"/> N NA		

Water Quality Parameters									
Beginning purge time: 12:05			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
23	12:10							No monument installed yet!	
30	12:15							goes to black turbid becoming clearer purged dry after 23L. Allowed to recharge.	
50	12:35							goes becoming cloudy for clear after 25L. purged dry after another 10L. Allowed to recharge becoming clearer after 35L. No odour.	
a 5.5 well volumes removed. Developed.									
*pH, temp, cond readings not necessary if well is purged dry							Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		
50	Total Well Volume			Sample time			Containers used		
Actual amount of water prior to sampling									
	Flow rate mL/minute			Did field parameters stabilise?			Was the well dry purged?		
				Y N <u>NA</u>			Y <input checked="" type="checkbox"/> N		

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Job Information	
Date: 10/12/13	Time: arrive 12:55 depart
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: N.H
Well ID: BE-MW02	Weather: Fine, hot, windy

Equipment	
Water quality equipment description: NA	Interface probe number: 540 3954
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
7.550 m	(-) 1.420 m	(=) 6.13 m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			6.13 m	(x) 1.96	(=) 12.015 L				
Depth to product: _____ m		Product Thickness: _____ m		Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N		NA			

Water Quality Parameters									
Beginning purge time:			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
20	13:05							* No monument installed yet. black, very turbid. No odour. Purged 20L after 20L. Allowed to recharge. potential oil globules on surface of purged water. purged another 5L. Dry. Not recharging very quickly. Purged dry again. slow recharge. developed ~ 3-5 well volumes removed.	
25	13:15								
30	13:30								
*pH, temp, cond readings not necessary if well is purged dry							Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth		
Total Well Volume			Sample time _____			Containers used _____			
Actual amount of water prior to sampling									
Flow rate mL/minute		Did field parameters stabilise?			Y N NA		Was the well dry purged? Y N		

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Job Information	
Date: 10/12/13	Time: arrive 13:35 depart
Project Name: Symphony	Project Number: 0224193
Site Location: Bayswater	Sampler: N.H
Well ID: BE-MW03	Weather: Fine, hot, windy

Equipment	
Water quality equipment description: NA	Interface probe number: SYD 3954
Purging equipment: (please circle)	Bailer type: Plastic Teflon
	Pump type: Peristaltic <u>Submersible</u> Micro-purge Amazon Other:

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V $= Pr \times r \times h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.49	1.96	7.85	12.3	17.7	31.4	49.1	70.7	
Total Well Depth	(-) Water level	(=) Water Column							
7.035 m	(-) 2.965 m	(=) 4.07 m							
			Water Column	(x) Conversion Factor	(=) Litres per 1 Well Volume				
			4.07 m	(x) 1.96	(=) 7.977 L				
Depth to product: — m		Product Thickness: — m		Verified with Bailer: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N		NA.			

Water Quality Parameters									
Beginning purge time: 13:41			Ending purge time:				Pump Intake Depth (mbtoc):		
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
16	13:45							black, very turbid water. No odour	
20	13:55							Purged dry after 16L. Allowed to recharge.	
24	14:05							as above, purged dry after another 4L.	
28	14:15							allowed to recharge.	
								as above, becoming cloudy to clear.	
								purged dry after another 4L.	
								as above - purged dry after another 4L.	
								~ 4 well volumes removed.	
								Redoxed	
*pH, temp, cond readings not necessary if well is purged dry <span style="float: right;">Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth</span>									
28.		Total Well Volume			Sample time		Containers used		
		Actual amount of water prior to sampling							
		Flow rate mL/minute			Did field parameters stabilise?		Was the well dry purged?		
					Y N <u>NA</u>		Y <input checked="" type="checkbox"/> N		

Field QC Checks			
Was pre-cleaned sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Job Information	
Date: <u>26.11.13</u>	Time: arrive <u>1405</u> depart <u>1440</u>
Project Name: <u>Symphony</u>	Project Number:
Site Location: <u>Bayswater</u>	Sampler: <u>J. Grant</u>
Well ID: <u>BE-MW04</u>	Weather: <u>fine</u>

Equipment	
Water quality equipment description:	Interface probe number: <u>NSW 4254 30m</u>
Purging equipment: (please circle)	Bailer type: <u>Plastic</u> <u>Teflon</u> Pump type: <u>Peristaltic</u> <u>Submersible</u> <u>Micro-purge</u> <u>Amazon</u> <u>Other: <u>Manjocor</u></u>

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	<b>Volume of water in well / V</b> $= Pr \times r \times h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	<u>1.96</u>	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column <u>9.595</u> m (-) <u>6.895</u> m (=) <u>2.700</u> m <u>6.8</u> Water Column (x) Conversion Factor (=) Litres per 1 Well Volume <u>2.7</u> <u>2.7</u> m (x) <u>1.96</u> (=) <u>~ 5.3</u> L									
Depth to product: <u>1</u> m		Product Thickness: <u>1</u> m		Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N					

Water Quality Parameters									
Beginning purge time:					Ending purge time:				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
								<u>Very turbid brown to</u> <u>turbid brown</u> <u>No odour</u>	
								<u>Good recharge 70L</u> <u>taken</u>	
*pH, temp, cond readings not necessary if well is purged dry								<b>Example Comments:</b> clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	
<u>70</u>	<b>Total Well Volume</b> Actual amount of water prior to sampling			Sample time _____			Containers used _____		
	<b>Flow rate</b> mL/minute			Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA			Was the well dry purged? <input type="checkbox"/> Y <input type="checkbox"/> N		

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was pre-cleaning sampling equipment properly protected from contamination?	<input type="checkbox"/> Y	<input type="checkbox"/> N	
Was documentation of equipment conducted?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Were air bubbles present in vials at time of collection?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Was sample for metals field filtered prior to preservations?	<input type="checkbox"/> Y	<input type="checkbox"/> N	<input type="checkbox"/> NA
Duplicate sample collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Duplicate sample ID _____
Rinsate blank collected?	<input type="checkbox"/> Y	<input type="checkbox"/> N	Rinsate blank ID _____



# Groundwater - Well Sampling Data Form

Job Information	
Date: 26.11.13	Time: arrive 1325 depart
Project Name: Symphony	Project Number:
Site Location: Bayswater	Sampler: J. Grant
Well ID: BE-MW05	Weather: Fine

Equipment	
Water quality equipment description:	Interface probe number: NSW 4254 30m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic Submersible Micro-purge Amazon Other: Monsoon

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = $\pi r^2 h$ V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Conversion Factor (volume in factor L/m)	0.98	1.96	7.85	31.4	49.1	70.7	125.7	196.3	
Total Well Depth (-) Water level (=) Water Column 8.150 m (-) 6.135 m (=) 2.015 m Water Column (x) Conversion Factor (=) Litres per Well Volume 2.015 m (x) 1.96 (=) 4 L									
Depth to product: / m Product Thickness: / m Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N									

Water Quality Parameters									
Beginning purge time: 1335					Ending purge time: 1355				
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
								Very turbid - light brown - No odour dry @ ~ 10L	
								" " ~ 11L	
								" " ~ 12L	
								slow recharge	
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	
12		Total Well Volume			Actual amount of water prior to sampling			Sample time _____ Containers used _____	
		Flow rate			mL/minute			Did field parameters stabilise? <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA Was the well dry purged? <input type="checkbox"/> Y <input type="checkbox"/> N	

Field QC Checks			
Was pre-cleaning sampling equipment used for these samples?	Y	N	
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N	
Was documentation of equipment conducted?	Y	N	NA
Were air bubbles present in vials at time of collection?	Y	N	NA
Was sample for metals field filtered prior to preservations?	Y	N	NA
Duplicate sample collected?	Y	N	Duplicate sample ID _____
Rinsate blank collected?	Y	N	Rinsate blank ID _____

401276375

lyn

8.150  
6.135



# Groundwater - Well Sampling Data Form

Job Information	
Date: 25.11.13	Time: arrive 1415 depart 1450
Project Name: Symphony	Project Number:
Site Location: Poyonwater	Sampler: J.h
Well ID: BE MW06	Weather: overcast

Equipment	
Water quality equipment description:	Interface probe number: NSW 4254 30m
Purging equipment: (please circle)	Bailer type: Plastic Teflon Pump type: Peristaltic Submersible Micro-purge Amazon Other: Monicon

Well Gauging and Purge Volume Calculations									
Casing Diameter	25mm	50mm	100mm	125mm	150mm	200mm	250mm	300mm	Volume of water in well / V = Pr x r x h
Conversion Factor (volume in factor L/m)	0.98	0.96	7.85	31.4	49.1	70.7	125.7	196.3	V = volume in litres P = 3.14159 r = radius in cm h = height of water column in cm
Total Well Depth (-) Water level (=) Water Column 9.860 m (-) 4.390 m (=) 5.470 m 4.390 / 5.470 Water Column (x) Conversion Factor (=) Litres per 1 Well Volume 5.47 m (x) 1.96 (=) ~ 11 L									
Depth to product: 1 m Product Thickness: 1 m Verified with Bailer: <input type="checkbox"/> Y <input checked="" type="checkbox"/> N									

Water Quality Parameters									
Beginning purge time: 1420			Ending purge time: 1440						
Litres	Time	PH	Temp °C	Cond mS/cm	DO mg/L	Redox mV	Drawdown <10cm	Comments	
								Turbid light brown No odour dry @ -30L less turbid slightly cloudy / brown dry @ -45L	
*pH, temp, cond readings not necessary if well is purged dry								Example Comments: clear / slightly cloudy / turbid / very turbid / no odour / slight odour / odour / strong odour / drawdown depth	
45		Total Well Volume			Actual amount of water prior to sampling		Sample time		Containers used
		Flow rate mL/minute			Did field parameters stabilise?			Was the well dry purged?	

Field QC Checks				
Was pre-cleaning sampling equipment used for these samples?	Y	N		
Was pre-cleaning sampling equipment properly protected from contamination?	Y	N		
Was documentation of equipment conducted?	Y	N	NA	
Were air bubbles present in vials at time of collection?	Y	N	NA	
Was sample for metals field filtered prior to preservations?	Y	N	NA	
Duplicate sample collected?	Y	N		Duplicate sample ID _____
Rinsate blank collected?	Y	N		Rinsate blank ID _____