

# Elevation Contours (m AHD)

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



# Hydrogeology & Groundwater

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Hydrogeology

Description of aquifers on-site:

Description
Fractured or fissured, extensive aquifers of low to moderate productivity

Description of aquifers within the dataset buffer:

Description
Fractured or fissured, extensive aquifers of low to moderate productivity

Hydrogeology Map of Australia : Commonwealth of Australia (Geoscience Australia)  
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## Botany Groundwater Management Zones

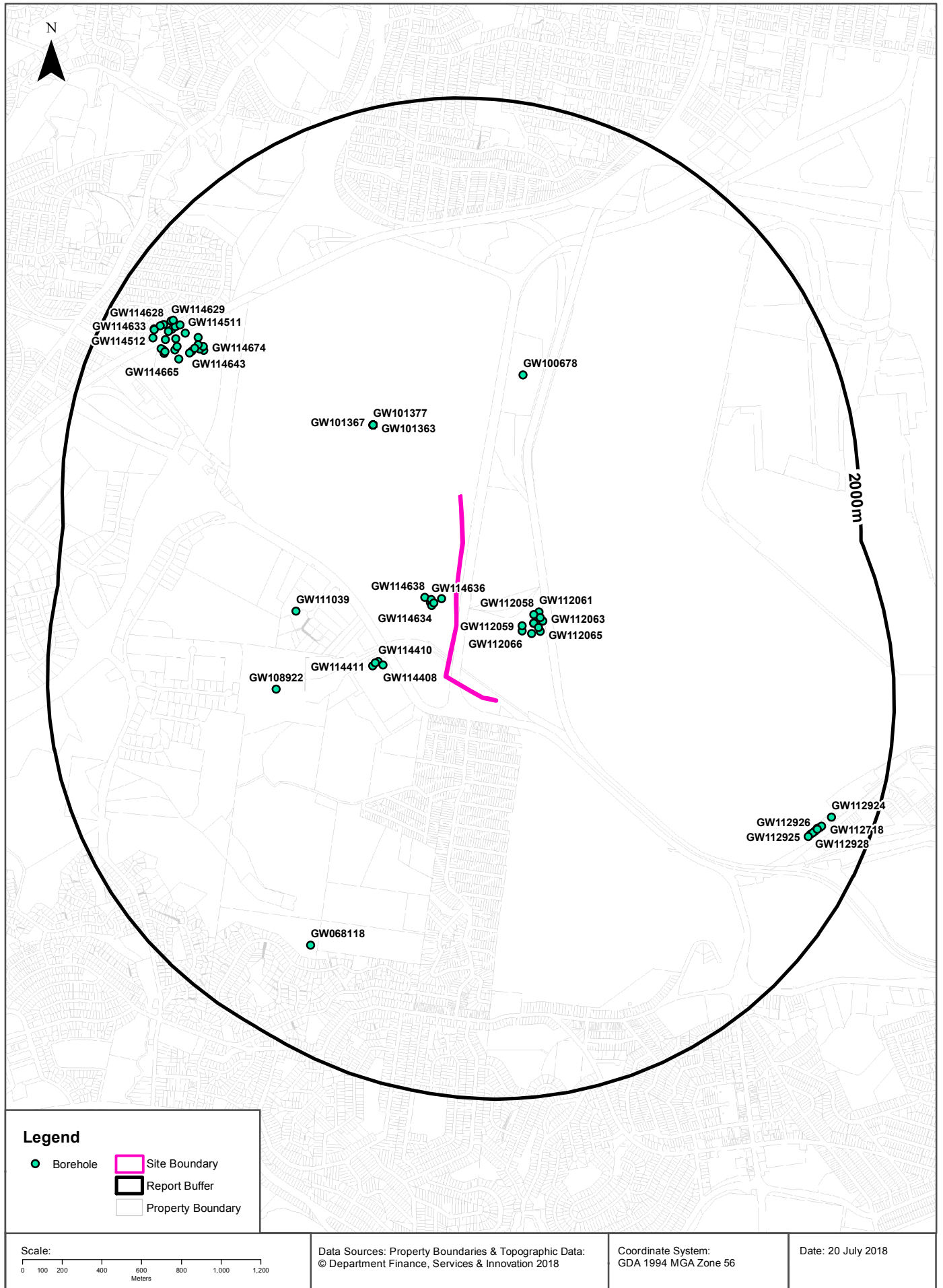
Groundwater management zones relating to the Botany Sand Beds aquifer within the dataset buffer:

Management Zone No.	Restriction	Distance	Direction
N/A	No records in buffer		

Botany Groundwater Management Zones Data Source : NSW Department of Primary Industries

# Groundwater Boreholes

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



# Hydrogeology & Groundwater

## Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### Groundwater Boreholes

Boreholes within the dataset buffer:

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW114817	10BL605478	Bore	Private	Monitoring bore	ENVIRODRILL	11/12/2014	3.00	3.00					67m	North West
GW114637	10BL605432	Bore	Private	Monitoring bore		07/11/2013	3.00	3.00					107m	West
GW114634	10BL605432	Bore	Private	Monitoring bore	ENVIRODRILL	21/03/2014	2.40	2.40					118m	West
GW114636	10BL605432	Bore	Private	Monitoring bore		07/11/2013	3.00	3.00					121m	West
GW114635	10BL605432	Bore	Private	Monitoring bore		07/01/2013	3.00	3.00					125m	West
GW114638	10BL605432	Bore	Private	Monitoring bore		07/11/2013	3.00	3.00					152m	West
GW114408	10BL605157	Bore	Private	Monitoring		06/03/2012	7.20	7.20					315m	South West
GW112059	10BL157702	Bore	Private	Monitoring		03/08/1994	1.00	1.00					327m	East
GW112066	10BL157702	Bore	Private	Monitoring		03/08/1994	2.00	2.00					328m	East
GW114410	10BL605157	Bore	Private	Monitoring		06/03/2012	6.00	6.00					341m	South West
GW114409	10BL605157	Bore	Private	Monitoring		06/03/2012	6.00	6.00					356m	South West
GW114411	10BL605157	Bore	Private	Monitoring		06/03/2012	4.60	4.60					367m	South West
GW112062	10BL157702	Bore	Private	Monitoring		03/08/1994	3.00	3.00					376m	East
GW112058	10BL157702	Bore	Private	Monitoring		03/08/1994	2.00	2.00					385m	East
GW100524	10BL156496	Bore	Private	Monitoring		14/10/1993	11.21	11.21					386m	East
GW112057	10BL157702	Bore	Private	Monitoring		03/08/1994	1.00	1.00					386m	East
GW100525	10BL156496	Bore	Private	Monitoring		14/10/1993	13.48	13.48					386m	East
GW100526	10BL156496	Bore	Private	Monitoring		14/10/1993	12.38	12.38					386m	East
GW112065	10BL157702	Bore	Private	Monitoring		03/08/1994	2.00	2.00					408m	East
GW112060	10BL157702	Bore	Private	Monitoring		03/08/1994	2.00	2.00					409m	East
GW112061	10BL157702	Bore	Private	Monitoring		03/08/1994	1.20	1.20					412m	East
GW112064	10BL157702	Bore	Private	Monitoring		03/08/1994	1.70	1.70					418m	East
GW112063	10BL157702	Bore	Private	Monitoring		03/08/1994	1.50	1.50					431m	East
GW101377	10BL156497	Bore	Mines	Monitoring		09/04/1992	5.10	5.10					561m	North West
GW101367	10BL156497	Bore	Mines	Monitoring		04/05/1992	26.00	30.00					561m	North West
GW101375	10BL156497	Bore	Mines	Monitoring		12/05/1992	11.00	11.00					561m	North West
GW101385	10BL156497	Bore	Mines	Monitoring		29/04/1992	6.00	6.00					561m	North West
GW101363	10BL156497	Bore	Mines	Monitoring		08/04/1992	21.00	21.00					561m	North West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW101387	10BL156497	Bore	Mines	Monitoring		30/04/1992	13.00	13.00					561m	North West
GW101368	10BL156497	Bore	Mines	Monitoring		14/05/1992	5.60	5.60					561m	North West
GW101388	10BL156497	Bore	Mines	Monitoring		13/05/1992	10.00	10.00					561m	North West
GW101374	10BL156497	Bore	Mines	Monitoring		12/05/1992	38.60	38.60					561m	North West
GW101366	10BL156497	Bore	Mines	Monitoring		28/04/1992	5.00	5.00					561m	North West
GW101386	10BL156497	Bore	Mines	Monitoring		01/05/1992	10.10	10.10					561m	North West
GW101370	10BL156497	Bore	Mines	Monitoring		23/04/1992	40.00	40.00					561m	North West
GW101382	10BL156497	Bore	Mines	Monitoring		14/04/1992	13.50	13.50					561m	North West
GW101551	10BL156497	Bore		Monitoring		18/05/1992	6.00	6.00					561m	North West
GW101378	10BL156497	Bore	Mines	Monitoring		10/04/1992	19.60	19.60					561m	North West
GW101365	10BL156497	Bore	Mines	Monitoring		28/04/1992	17.50	17.60					561m	North West
GW101372	10BL156497	Bore	Mines	Monitoring		15/04/1992	26.70	26.70					561m	North West
GW101376	10BL156497	Bore	Mines	Monitoring		08/04/1992	11.80	11.80					561m	North West
GW101392	10BL156497	Bore	Mines	Monitoring		15/05/1992	13.00	13.00					561m	North West
GW101364	10BL156497	Bore	Mines	Monitoring		08/04/1992	7.90	7.90					561m	North West
GW101369	10BL156497	Bore	Private	Monitoring		08/05/1992	6.50	6.60					561m	North West
GW101384	10BL156497	Bore	Mines	Monitoring		29/04/1992	22.00	22.00					561m	North West
GW101389	10BL156497	Bore	Mines	Monitoring		13/05/1992	4.00	4.00					561m	North West
GW101383	10BL156497	Bore	Mines	Monitoring		22/04/1992	9.00	9.00					561m	North West
GW101379	10BL156497	Bore	Mines	Monitoring		01/04/1992	9.60	9.60					561m	North West
GW101371	10BL156497	Bore	Mines	Monitoring		24/04/1992	8.60	8.60					561m	North West
GW101391	10BL156497	Bore	Mines	Monitoring		18/05/1992	6.50	6.50					561m	North West
GW101380	10BL156497	Bore	Mines	Monitoring		14/05/1992	15.00	15.00					561m	North West
GW101381	10BL156497	Bore	Mines	Monitoring		13/04/1992	32.50	32.50					561m	North West
GW101390	10BL156497	Bore	Mines	Monitoring		18/05/1992	12.00	12.00					561m	North West
GW101373	10BL156497	Bore	Mines	Monitoring		24/04/1992	8.00	8.00					561m	North West
GW100678	10BL156580	Bore	Private	Monitoring	KH Adams & Sons Pty Ltd	22/03/1995	65.00	65.00	2200	8.20	7.500		682m	North
GW111039	10BL604123	Well	Private	Monitoring	Macquarie Drilling	16/07/2010	3.50	3.50		1.00			800m	West
GW108922	10BL601914, 10BL602135, 10WA106720	Bore	Private	Industrial	Southern Tablelands Drilling	17/06/2008	31.00	31.00	384	7.00	0.080		850m	South West
GW114674	10BL605474	Bore	Private	Monitoring bore	ENVIRODRILL	19/03/2014	5.00	5.00					1479 m	North West
GW114672	10BL605474	Bore	Private	Monitoring bore		06/11/2013	5.50	5.50					1492 m	North West
GW114673	10BL605474	Bore	Private	Monitoring bore		04/11/2013	5.50	5.50					1499 m	North West
GW068118	10BL145389, 10WA106088	Bore	Private	Domestic, Stock		18/02/1992	46.00	46.00		6.00	8.000		1507 m	South West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW114671	10BL605474	Bore	Private	Monitoring bore		05/11/2013	6.00	6.00					1518 m	North West
GW114644	10BL605430	Bore	Private	Monitoring bore		07/11/2013	5.50	5.50					1525 m	North West
GW114643	10BL605430	Bore	Private	Monitoring bore	ENVIRODRILL	19/05/2014	5.00	5.00					1531 m	North West
GW114670	10BL605474	Bore	Private	Monitoring bore		05/11/2013	6.00	6.00					1537 m	North West
GW114642	10BL605430	Bore	Private	Monitoring bore		05/11/2013	6.00	6.00					1537 m	North West
GW114665	10BL605474	Bore	Private	Monitoring bore	ENVIRODRILL	01/02/2014	7.50	7.50					1570 m	North West
GW114668	10BL605474	Bore	Private	Monitoring bore	ENVIRODRILL	01/02/2014	7.30	7.30					1604 m	North West
GW114669	10BL605474	Bore	Private	Monitoring bore	ENVIRODRILL	01/02/2014	7.30	7.30					1607 m	North West
GW114666	10BL605474	Bore	Private	Monitoring bore	ENVIRODRILL	01/02/2014	7.50	7.50					1609 m	North West
GW114667	10BL605474	Bore	Private	Monitoring bore	ENVIRODRILL	01/02/2014	7.20	7.20					1631 m	North West
GW114511	10BL605524	Bore	Private	Monitoring	ENVIRODRILL	28/03/2014	8.60	8.60					1648 m	North West
GW114640	10BL605430	Bore	Private	Monitoring bore		05/11/2013	6.00	6.00					1649 m	North West
GW114641	10BL605430	Bore	Private	Monitoring bore	ENVIRODRILL	17/03/2014	5.00	5.00					1649 m	North West
GW114557	10BL605526	Bore	Private	Monitoring bore	ENVIRODRILL	28/03/2014	6.40	6.40					1657 m	North West
GW114823	10BL605533	Bore	Private	Monitoring bore		27/11/2013	7.30	7.30		6.00			1660 m	North West
GW114509	10BL605535	Bore	Private	Monitoring		28/03/2014	6.80	6.80					1664 m	North West
GW114508	10BL605525	Spear	Private	Monitoring	ENVIRODRILL	21/03/2014	6.50	6.50					1672 m	North West
GW114639	10BL605430	Bore	Private	Monitoring bore		07/11/2013	5.50	5.50					1674 m	North West
GW114822	10BL605516	Bore	Private	Monitoring bore	Total Drilling	16/02/2014	5.40	5.40		3.00			1675 m	North West
GW114513	10BL605522	Bore	Private	Monitoring	ENVIRODRILL	21/03/2014	6.80	6.80					1682 m	North West
GW114631	10BL605536	Bore	Local Govt	Monitoring bore	ENVIRODRILL	28/03/2014	6.80	6.80					1689 m	North West
GW114629	10BL605536	Bore	Local Govt	Monitoring bore	ENVIRODRILL	21/03/2014	8.60	8.60					1697 m	North West
GW112925	10BL604900	Bore	Private	Monitoring	Coffey Environments	03/03/2011	4.00	4.00					1710 m	South East
GW112926	10BL604900	Bore	Private	Monitoring	Coffey Environments	03/03/2011	4.60	4.60					1717 m	South East
GW114628	10BL605536	Bore	Local Govt	Monitoring bore	ENVIRODRILL	21/03/2014	7.30	7.30					1719 m	North West
GW112927	10BL604900	Bore	Private	Monitoring	Coffey Environments	26/11/2004	5.50	5.50					1726 m	South East
GW114632	10BL605536	Bore	Local Govt	Monitoring bore	ENVIRODRILL	28/03/2014	6.00	6.00					1730 m	North West
GW112928	10BL604900	Bore	Private	Monitoring	Coffey Environments	26/05/2011	7.50	7.50					1732 m	South East
GW114512	10BL605534	Bore	Other Govt	Monitoring	ENVIRODRILL	28/03/2014	6.00	6.00					1734 m	North West
GW112716	10BL604502	Bore	Private	Monitoring	TERRATEST	03/03/2011	5.30	5.30		1.20			1738 m	South East
GW112929	10BL604900	Bore	Private	Monitoring	Coffey Environments	26/05/2011	6.70	6.70					1739 m	South East
GW112717	10BL604502	Bore	Private	Monitoring	TERRATEST	03/03/2011	6.00	6.00		1.30			1748 m	South East
GW114630	10BL605536	Bore	Local Govt	Monitoring bore	ENVIRODRILL	28/03/2014	6.10	6.10					1749 m	North West
GW114633	10BL605536	Bore	Local Govt	Monitoring bore	ENVIRODRILL	21/03/2014	7.80	7.80					1750 m	North West

GW No.	Licence No	Work Type	Owner Type	Purpose	Contractor	Complete Date	Final Depth (m)	Drilled Depth (m)	Salinity (mg/L)	SWL (m)	Yield (L/s)	Elev (AHD)	Dist	Dir
GW112718	10BL604502	Bore	Private	Monitoring	TERRATEST		4.60	4.60		1.20			1754 m	South East
GW112924	10BL604900	Bore	Private	Monitoring	Coffey Environments	03/03/2011	5.30	5.30					1784 m	South East

Borehole Data Source : NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corporation for all bores prefixed with GW. All other bores © Commonwealth of Australia (Bureau of Meteorology) 2015. Creative Commons 3.0 © Commonwealth of Australia <http://creativecommons.org/licenses/by/3.0/au/deed.en>

# Hydrogeology & Groundwater

## Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### Driller's Logs

Drill log data relevant to the boreholes within the dataset buffer:

Groundwater No	Drillers Log	Distance	Direction
GW114817	0.00m-1.00m GRAVEL FILL 1.00m-3.00m SANDY CLAY DARK GREY FILL	67m	North West
GW114637	0.00m-0.50m FILL,CEMENTED SLAG COMPACTED 0.50m-1.20m FILL METAL BLACK 1.20m-3.00m CLAY DARK GREY	107m	West
GW114634	0.00m-0.50m FILL CEMENTED SLAG 0.50m-1.20m FILL METAL BLACK 1.20m-2.40m CLAY DARK GREY	118m	West
GW114636	0.00m-0.50m FILL CEMENTED SLAG COMPACTED 0.50m-1.20m FILL METAL BLACK 1.20m-3.00m CLAY DARK GREY	121m	West
GW114635	0.00m-0.50m FILL ,CEMENTED SLAG 0.50m-1.20m FILL METAL BLACK 1.20m-3.00m CLAY DARK GREY	125m	West
GW114638	0.00m-0.50m FILL CEMENTED SLAG COMPACTED 0.50m-1.20m FILL, METAL BLACK 1.20m-3.00m CLAY DARK GREY	152m	West
GW114408	0.00m-0.25m CONCRETE SLABAND MINOR SUB BASE 0.25m-3.00m FILL SILTY CLAY BROWN MINOR GRAVEL 3.00m-7.20m SILTY CLAY M/BROWN,GREY,STIFF	315m	South West
GW114410	0.00m-0.25m CONCRETE SLAB AND MINOR FILL 0.25m-0.70m FILL, GRAVELLY SILTY 0.70m-3.00m FILL GRAVELLY SANDY CLAY 3.00m-6.00m SILTY CLAY MED.BROWN/GREY	341m	South West
GW114409	0.00m-0.25m CONCRETE SLAB AND MINOR SUB BASE 0.25m-2.10m FILL GRAVELLY CLAY 2.10m-5.00m SILTY CLAY FIRM M/BROWN,MOIST 5.00m-6.00m SILTY CLAY,M/GREY BROWN STIFF NO ODOUR	356m	South West
GW114411	0.00m-0.25m CONCRETE SLAB,FILL,SANDY CLAY 0.25m-2.10m FILL SANDY CLAY 2.10m-2.40m FILL SANDY CLAY AND GRAVEL 2.40m-4.00m SILTY CLAY DARK GREY 4.00m-4.60m SILTY CLAY DARK GREY MOIST	367m	South West
GW100524	0.00m-4.00m GREY SLAG FILL 4.00m-5.00m GREY SAND 5.00m-11.21m DARK BROWN TO GREY STIFF ESTUARINE CLAYS	386m	East
GW100525	0.00m-3.50m GREY SLAG FILL 3.50m-5.00m GREY SAND 5.00m-7.00m DARK BROWN TO GREY STIFF ESTUARINE CLAYS. SOME BANDS OF SAND. 7.00m-13.48m DARK BROWN TO GREY STIFF ESTUARINE CLAYS	386m	East
GW100526	0.00m-5.00m GREY SLAG FILL 5.00m-6.80m DARK GREY SLIGHTLY SANDY FIRM ESTUARINE CLAYS. 6.80m-12.38m DARK BROWN TO GREY STIFF ESTUARINE CLAYS.	386m	East
GW101363	0.00m-7.00m FILL. Dark slag fill range from 300mm near surface to 10mm and fines increase at depth 7.00m-10.00m CLAYS.Esturine. Dark brown to grey stiff esturine clays 10.00m-16.60m SANDSTONE.Weathered grey to light yellow.Drilled to refusal. 16.60m-21.00m SANDSTONE. Fresh grey sandstone. Water loss high.	561m	North West
GW101364	0.00m-6.80m FILL Dark slag fill size range from 300mm near surface to 10 mm and fines at increased depth 6.80m-7.90m CLAYS.Esturine. Dark brown to grey stiff esturine clays	561m	North West
GW101365	0.00m-2.00m FILL. Compacted coal wash reject 2.00m-12.60m CLAYS.ESTURINE. Dark brown to grey stiff esturine clays 12.60m-15.60m SANDSTONE.H.W. Sandstone becomming fresher with increasing depth 15.60m-17.60m SANDSTONE. Fresh grey sandstone	561m	North West



Groundwater No	Drillers Log	Distance	Direction
GW101366	0.00m-2.00m FILL. Compacted coalwash reject. 2.00m-5.00m CLAYS.ESTURINE. Dark brown to grey stiff esturine clays.	561m	North West
GW101367	1.80m-5.20m FILL. Compacted coal wash reject 5.20m-6.40m ESTURINE CLAYS.Dark brown to grey stiff esturine clays 6.40m-13.00m WEATHERED SANDSTONE.Green to grey weathered sandstone with minor gravels 13.00m-30.00m SANDSTONE.Fine grained grey fresh sandstone	561m	North West
GW101368	0.00m-1.40m FILL. Dark slag fill with fines and some clay> 1.40m-3.20m CLAY.Red to brown stiff clay.Some silt 3.20m-4.40m SAND. Grey to lighbrown silty sand> 4.40m-5.60m CLAY. Stiff grey clay.	561m	North West
GW101369	0.00m-0.60m TOP SOIL.Dark top soil 0.60m-1.80m FILL. Grey slag fill 1.80m-5.00m FILL. Compacted coal wash reject. 5.00m-6.40m ESTURINE CLAYS.Dark brown to grey stiff esturine clays. 6.40m-6.60m CLAY. Very silty clay.	561m	North West
GW101370	0.00m-5.40m FILL.Dark grey slag fill> Some brown slags present> 5.40m-7.60m ESTURINE CLAY. Firm to stiff orange brown clay becoming grey with increasing depth. Some gravels. 7.60m-20.00m ESTURINE CLAYS.Dark brown to grey stiff esturine clays. At 15.8 m Grey stiff clays.At 17.9m Interbedded sands and clays. 20.00m-22.40m ESTURINE CLAYS.Dark brown to grey stiff esturine clays interbedded with sands> 22.40m-23.40m RESIDUAL CLAY. Light green clays> 23.40m-31.20m WEATHERED SANDSTONE.Fine grained highly weathered green sandstone 31.20m-40.00m SANDSTONE.Fine grained fresh grey sandstone.	561m	North West
GW101371	0.00m-5.40m FILL.Dark slag fill.Some brown slags present. 5.40m-7.60m CLAY,ESTURINE. Firm to stiff orange brown clay becoming grey with increasing depth.Some gravels 7.60m-8.60m CLAY, ESTURINE.Dark brown to grey stiff esturine clays>	561m	North West
GW101372	0.00m-3.40m FILL.Dark grey slag fill. Some brown slags present. 3.40m-6.40m CLAY. Light brown to bright orange wet clay. Possibly of filter cake or flue dust origin 6.40m-19.20m CLAY, ESTURINE. Dark brown to grey stiff esturine clays. 19.20m-22.40m SANDSTONE. E.W. Light brown sandstone. 22.40m-26.70m SANDSTONE. Fresh grey fine grained sandstone.	561m	North West
GW101373	0.00m-3.40m FILL.Dark grey slag fill. Some brown slags present 3.40m-6.40m CLAY.Light brown to bright orange wet clay.Possibly of filter cake or flue dust origin. 6.40m-8.00m CLAY,ESTURINE.Dark brown to grey stiff esturine clays.	561m	North West
GW101374	0.00m-0.60m CLAY. Loose sandy clay. 0.60m-9.00m CLAY. Firm sandy grey to brown clay. 9.00m-10.00m CLAY, ESTURINE. Sandy clay esturine clays> 10.00m-21.00m CLAYS, ESTURINE. Sandy esturine clays with some fine gravels. 21.00m-38.60m SANDSTONE.Fine to medium grained fresh grey sandstone.	561m	North West
GW101375	0.00m-0.60m CLAY. Loose sandy clay 0.60m-9.00m CLAY. Firm sandy grey to brownclay> 9.00m-11.00m CLAYS,ESTURINE.Sandy clay. esturine clays,	561m	North West
GW101376	0.00m-3.00m FILL. Slag fill with some dark clays. 3.00m-4.80m GRAVELS.Gravel particles to 6mm size.Sand and clay present.EW Sandstone. 4.80m-8.20m SANDSTONE.EW toW light brown sandstone becoming harder with increased depth. 8.20m-11.80m SANDSTONE.Fresh fine grained grey sandstone.	561m	North West
GW101377	0.00m-3.00m FILL. Slag fill with some dark clays. 3.00m-5.10m GRAVELS.Gravel particles to 6mm size.Sand and clay present.EW Sandstone.	561m	North West
GW101378	0.00m-8.60m FILL.Dark slag fill size range from 300mm near surface to 10mm & fines at increased depth. 8.60m-16.20m CLAY,ESTURINE.Dark grey stiff esturine clay. 16.20m-17.40m CLAY,ESTURINE.Dark grey stiff esturine clays with some minor sandstone particles. 17.40m-19.60m SANDSTONE.Fresh hard grey sandstone.	561m	North West
GW101379	0.00m-8.60m FILL.Dark slag fill size range from 300mm near surface to 10mm& fines at increased depth. 8.60m-9.60m CLAY,ESTURINE.Dark grey stiff esturine clay.	561m	North West
GW101380	0.00m-1.40m FILL.Dark slag fill with fines and some clay 1.40m-3.20m CLAY.Red to brown stiff clay.Some silt. 3.20m-4.40m SAND.Grey to light brown silty sand. 4.40m-6.00m CLAY.Stiff grey clay. 6.00m-6.80m SAND.Light brown silty sand. 6.80m-7.00m CLAY. Stiff grey to brown clay. 7.00m-9.00m SANDSTONE.Gravelly residual brown to yellow sandstone. 9.00m-12.40m SANDSTONE.Moderately weathered yellow sandstone. 12.40m-15.00m SANDSTONE.Fresh light brown to yellow Budgong sandstone.	561m	North West

Groundwater No	Drillers Log	Distance	Direction
GW101381	0.00m-11.40m FILL. Mixed fill consisting of slag< filter cake and coalwash reject> Nodifinite bands-generally mixed. 11.40m-19.20m CLAY,ESTURINE:Grey esturine clay with some thin sand bands. Organic material< wood and root fragments. 19.20m-27.40m SANDSTONE.Weathered soft sandstone.Becomes less weathered with increasing depth. 27.40m-30.00m SANDSTONE.Brown to yellow slightly weathered sandstone. 30.00m-32.50m SANDSTONE.Fresh hard grey sandstone.	561m	North West
GW101382	0.00m-12.00m FILL.Mixed fill consisting of slag,Filter cake and coal wash reject. No difinite bands-generally mixed. 12.00m-13.50m CLAYS, ESTURINE.Firm dark esturine clays.	561m	North West
GW101383	0.00m-7.60m FILL.Dark slag fill size range from 300mm near surface to 10mm and fines at increased depth. 7.60m-9.00m CLAY,ESTURINE.Dark grey stiff esturine clay.	561m	North West
GW101384	0.00m-3.00m FILL. Compacted coal wash reject with brown clays and gravels. 3.00m-15.00m CLAYS,ESTURINE.Dark brown to grey stiff esturine clays. 15.00m-20.00m SAND. Light brown to yellow sands. 20.00m-20.80m SANDSTONE. Extremely to weathered sandstone. 20.80m-22.00m SANDSTONE. Fresh hard light brown sandstone.	561m	North West
GW101385	0.00m-3.00m FILL.Compacted coal wash reject with brown clays and gravels. 3.00m-6.00m CLAYS,ESTURINE Dark brown to grey stiff esturine clays.	561m	North West
GW101386	0.00m-9.00m FILL.Hard coal wash reject with slag possibly of open hearth furnace origin 9.00m-10.10m CLAYS,ESTURINE.Dark brown to grey stiff esturine clays.	561m	North West
GW101387	0.00m-7.20m FILL. Hard coal wash reject with slag possibly of open hearth furnace origin 7.20m-8.20m CLAYS,ESTURINE.Dark brown to grey stiff esturine clays. 8.20m-13.00m SANDSTONE.E.W. Sandstone with sandy clay.	561m	North West
GW101388	0.00m-1.40m FILL.Dark brown to grey soils with some clay.May be from North Wall construction.Becomes brown clay with incr. depth. 1.40m-5.00m CLAY.Red to brown stiff clay> Some silty sand and pebbles up to20mm. 5.00m-6.00m SANDSTONE.Light brown weathered sandstone. 6.00m-10.00m SANDSTONE.Fresh hard grey sandstone.	561m	North West
GW101389	0.00m-1.40m FILL. Dark brown to grey soils with some clay.May be from North Wall construction. Becomes brown clay with incrs.depth. 1.40m-4.00m CLAY.Red to brown stiff clay.Some silt.	561m	North West
GW101390	0.00m-2.00m TOP SOIL.Dark topsoil turning to soft brown clays. 2.00m-3.00m CLAY.Firm brown to light brown clay. 3.00m-7.00m CLAY.Red to brown stiff clay.Some silt. 7.00m-8.00m SANDSTONE.Extremely to weathered light brown sandstone. 8.00m-12.00m SANDSTONE. Fresh hard yellow to grey sandstone	561m	North West
GW101391	0.00m-0.40m TOP SOIL.Dark topsoil 0.40m-5.20m CLAY.Firm brown to light brown clay. 5.20m-6.50m CLAY.Red to brown stiff clay.Some silt	561m	North West
GW101392	0.00m-0.40m TOP SOIL.Dark topsopil 0.40m-5.20m CLAY.Firm brown to light brown clay 5.20m-7.00m CLAY.Red to brown stiff clay. Some silt 7.00m-7.60m CLAY.Stiff grey sandy clay. 7.60m-8.40m SANDSTONE.Extremely weathered light brown sandstone 8.40m-9.40m SANDSTONE.Weathered light brown to grey sandstone 9.40m-13.00m SANDSTONE.Fresh grey sandstone.	561m	North West
GW101551	0.00m-2.00m TOP SOIL. Dark topsoil turning to soft brown clays 2.00m-3.00m CLAY. Firm brown to light brown clay. 3.00m-6.00m CLAY. Red to brown stiff clay. Some silt	561m	North West
GW100678	0.00m-0.60m TOPSOIL 0.60m-3.80m WEATHERED BASALT 3.80m-9.00m BASALT 9.00m-16.00m INDURATED SHALE 16.00m-65.00m SANDSTONE	682m	North
GW111039	0.00m-1.50m CLAY, GREY AND YELLOW BROWN 1.50m-1.70m CLAY SANDY,BROWN AND GREY 1.70m-3.50m GRAVEL CLAYEY,BROWN,ORANGE AND YELLOW ,SANDY	800m	West
GW108922	0.00m-5.00m CLAY, TOPSOIL 5.00m-31.00m VOLCANIC BASALT	850m	South West
GW114674	0.00m-0.80m FILL.COMPACTED SLAG 0.80m-1.50m CLAY DARK GREY 1.50m-3.00m CLAY LIGHT BROWN 3.00m-4.80m CLAY LIGHTER BROWN 4.80m-5.00m SANDSTONE / GRAVELS	1479m	North West

Groundwater No	Drillers Log	Distance	Direction
GW114672	0.00m-0.80m FILL,CEMENTED SLAG,COMPACTED 0.80m-1.50m CLAY DARK GREY 1.50m-4.00m CLAY LIGHT BROWN 4.00m-5.50m SANDSTONE, GRAVELS	1492m	North West
GW114673	0.00m-0.80m FILL SLAG COMPACTED 0.80m-1.50m CLAY DARK GREY 1.50m-3.00m CLAY BROWN 3.00m-4.50m CLAY LIGHT BROWN 4.50m-5.50m SANDSTONE / GRAVELS	1499m	North West
GW068118	0.00m-1.00m TOP SOIL 1.00m-8.00m BROWN CLAY 8.00m-12.00m SAND 12.00m-14.00m SANDSTONE 14.00m-16.00m SHALE 16.00m-46.00m SANDSTONE	1507m	South West
GW114671	0.00m-1.00m FILL CEMENTED SLAG COMPACTED 1.00m-1.50m CLAY DARK GREY 1.50m-3.50m CLAY BROWN 3.50m-5.50m CLAY LIGHT BROWN 5.50m-6.00m SANDSTONE , GRAVELS	1518m	North West
GW114644	0.00m-0.80m FILL,COMPACTED SLAG 0.80m-1.50m CLAY DARK GREY 1.50m-3.00m CLAY LIGHT BROWN 3.00m-4.80m CLAY LIGHTER BROWN 4.80m-5.50m SANDSTONE GRAVELS	1525m	North West
GW114643	0.00m-0.80m FILL, COMPACTED SLAG 0.80m-1.50m CLAY DARK GREY 1.50m-3.00m CLAY LIGHT BROWN 3.00m-4.80m CLAY LIGHTER BRO:WN 4.80m-5.00m SANDSTONE GRAVELS	1531m	North West
GW114642	0.00m-1.00m FILL,CEMENTED SLAG, COMPACTED 1.00m-3.50m CLAY DARK GREY 3.50m-5.50m CLAY LIGHT BROWN 5.50m-6.00m SANDSTONE, GRAVELS	1537m	North West
GW114670	0.00m-1.00m FILL,CEMENTED SLAG,COMPACTED 1.00m-1.50m CLAY,DARK GREY 1.50m-3.50m CLAY BROWN 3.50m-5.50m CLAY LIGHT BROWN 5.50m-6.00m SANDSTONE GRAVELS	1537m	North West
GW114665	0.00m-1.50m SLAG COMPACTED 1.50m-2.60m CLAY BROWN 2.60m-3.60m CLAY GREY 3.60m-4.20m CLAY LIGHT BROWN 4.20m-6.00m SILTY CLAY BROWN 6.00m-7.50m CLAY BROWN/GREY , SILTSTONE,GRAVELS	1570m	North West
GW114668	0.00m-1.50m SLAG COMPACTED 1.50m-2.60m CLAY BROWN 2.60m-3.60m CLAY GREY 3.60m-4.20m CLAY LIGHT BROWN 4.20m-6.00m CLAY BROWN SILTY 6.00m-7.30m CLAY GREY/BROWN,SILTSTONE,GRAVEL	1604m	North West
GW114669	0.00m-1.50m SLAG COMPACTED 1.50m-2.60m CLAY BROWN 2.60m-3.60m CLAY GREY 3.60m-4.20m CLAY LIGHT BROWN 4.20m-6.00m SILTY CLAY BROWN 6.00m-7.30m CLAY BROWN/GREY,SILTSTONE,GRAVELS	1607m	North West
GW114666	0.00m-1.50m SLAG COMPACTED 1.50m-2.60m CLAY BROWN 2.60m-3.60m CLAY GREY 3.60m-4.20m CLAY LIGHT BROWN 4.20m-6.00m CLAY BROWN SILTY 6.00m-7.50m CLAY BROWN/GREY ,SILTSTONE,GRAVELS	1609m	North West
GW114667	0.00m-1.50m SLAG COMPACTED 1.50m-2.60m CLAY BROWN 2.60m-3.60m CLAY GREY 3.60m-4.20m CLAY LIGHT BROWN 4.20m-6.00m CLAY BROWN/SILTY 6.00m-7.20m CLAY BROWN/GREY,SILTSTONE,GRAVEL	1631m	North West

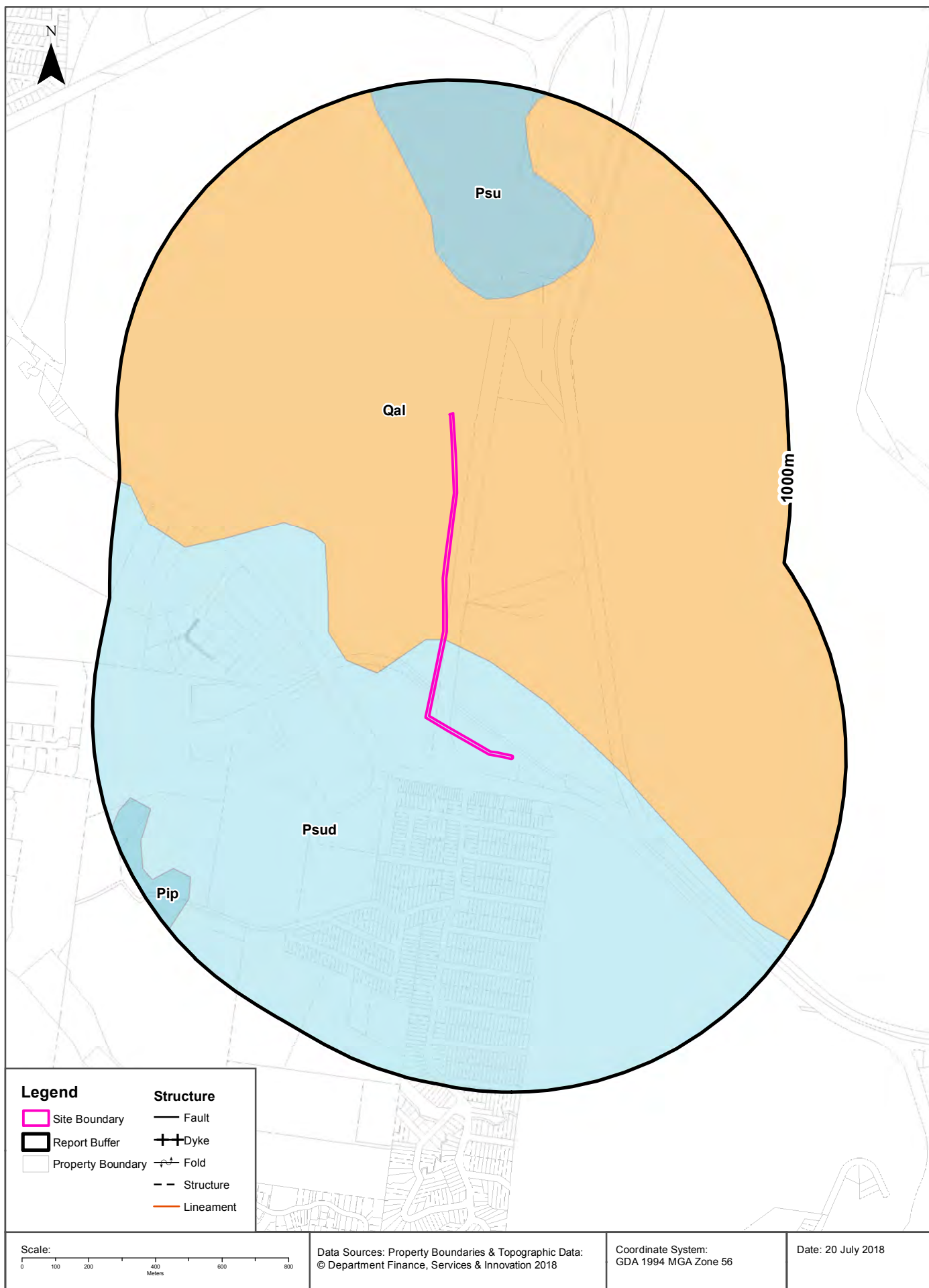
Groundwater No	Drillers Log	Distance	Direction
GW114511	0.00m-0.20m BITUMEN ROAD BASE 0.20m-0.40m BLUESTONE, GRAVEL 0.40m-1.00m CLAY BLACK 1.00m-1.80m BROWN SANDY CLAY 1.80m-3.40m CLAY GREY 3.40m-4.00m GREY SAND MOIST 4.00m-6.20m BROWN SANDY CLAY COARSE 6.20m-8.60m FRACTURED SANDSTONE GRAVELS	1648m	North West
GW114640	0.00m-1.00m FILL, CEMENTED SLAG, COMPACTED 1.00m-1.50m CLAY, DARK GREY 1.50m-3.50m CLAY BROWN 3.50m-5.50m CLAY LIGHT BROWN 5.50m-6.00m SANDSTONE GRAVELS	1649m	North West
GW114641	0.00m-0.80m FILL, COMPACTED SLAG 0.80m-1.50m CLAY DARK GREY 1.50m-3.00m CLAY LIGHT BROWN 3.00m-4.80m CLAY WHITE BROWN 4.80m-5.00m SANDSTONE GRAVELS	1649m	North West
GW114557	0.00m-1.50m (UNKNOWN) 1.50m-1.80m IRONSTONE 1.80m-3.80m SANDY GRAVELS / CLAY 3.80m-6.40m QUARTZ / SANDY GRAVELS	1657m	North West
GW114823	0.00m-2.00m FILL 2.00m-7.30m ALLUVIAL	1660m	North West
GW114509	0.00m-0.20m BITUMEN, ROAD BASE 0.20m-0.70m SILTY CLAY FILL 0.70m-1.20m BROWN SAND CLAY 1.20m-3.00m CLAY GREY 3.00m-3.30m SAND WHITE 3.30m-4.60m CLAY GREY 4.60m-4.90m SATURATED SANDS GREY 4.90m-6.80m SANDY CLAY COARSE GRAIN	1664m	North West
GW114508	0.00m-1.20m SANDY CLAY 1.20m-2.40m BLACK CLAY 2.40m-2.60m FINE SANDS SATURATED 2.60m-4.40m SANDSTONE GRAVELS W/BROWN CLAY 4.40m-6.50m BROWN SANDY CLAY	1672m	North West
GW114639	0.00m-0.80m FILL COMPACTED SLAG 0.80m-1.50m CLAY DARK GREY 1.50m-3.00m CLAY LIGHT BROWN 3.00m-4.80m CLAY WHITE BROWN 4.80m-5.50m SANDSTONE / GRAVELS	1674m	North West
GW114822	0.00m-3.00m FILL 3.00m-5.40m ALLUVIAL	1675m	North West
GW114513	0.00m-1.20m SANDY CLAY FILL 1.20m-2.40m BLACK CLAY 2.40m-2.60m FINE SANDS SATURATED 2.60m-4.40m GREY CLAY 4.40m-4.60m SANDSTONE GRAVELS W/BROWN CLAY 4.60m-6.80m BROWN SANDY CLAY	1682m	North West
GW114631	0.00m-0.20m BITUMEN ROAD BASE 0.20m-0.70m SILTY CLAY FILL 0.70m-1.20m SANDY CLAY BROWN 1.20m-3.00m CLAY GREY 3.00m-3.30m SAND WHITE WEATHERED 3.30m-4.60m CLAY GREY 4.60m-4.90m SAND GREY SATURATED 4.90m-6.80m SANDY CLAY COARSE GREY	1689m	North West
GW114629	0.00m-1.20m SANDY CLAY FILL 1.20m-2.40m CLAY BLACK 2.40m-2.60m SANDS SATURATED 2.60m-4.40m CLAY GREY 4.40m-4.60m SANDSTONES, GRAVELS W/BROWN CLAY 4.60m-8.00m SANDY CLAY BROWN 8.00m-8.60m SANDSTONE FRACTURED	1697m	North West
GW114628	0.00m-0.20m BITUMEN ROAD BASE 0.20m-0.70m SILTY CLAY FILL 0.70m-1.20m SANDY CLAY BROWN 1.20m-2.70m CLAY GREY 2.70m-3.00m SANDY CLAY SATURATED FINE GRAINED 3.00m-4.60m CLAY GREY 4.60m-4.90m SANDY CLAY SATURATED FINE GRAINED 4.90m-7.30m SANDSTONE COARSE GRAINED	1719m	North West

Groundwater No	Drillers Log	Distance	Direction
GW114632	0.00m-0.20m BITUMEN ROAD BASE 0.20m-0.70m SILTY CLAY / FILL 0.70m-1.20m SANDY CLAY BROWN 1.20m-3.00m CLAY GREY 3.00m-3.30m SAND WHITE WEATHERED 3.30m-4.60m CLAY GREY 4.60m-4.90m SAND GREY SATURATED 4.90m-6.00m SANDY CLAY COARSE GRAIN	1730m	North West
GW114512	0.00m-0.80m BLACK LOAMY SOIL 0.80m-2.40m CLAY BLACK 2.40m-3.00m BROWN SANDY CLAY 3.00m-3.20m SANDSTONE 3.20m-6.00m BROWN SANDY CLAY	1734m	North West
GW114630	0.00m-0.20m BITUMEN/ ROAD BASE 0.20m-0.30m SILTY CLAY FILL 0.30m-1.20m SANDY CLAY BROWN 1.20m-3.00m SAND WHITE WEATHERED 3.00m-4.60m CLAY GREY 4.60m-4.90m SAND GREY SATURATED 4.90m-6.10m SANDY CLAY COARSE GRAIN	1749m	North West
GW114633	0.00m-0.20m BITUMEN/ ROAD BASE 0.20m-0.70m SILTY CLAY FILL 0.70m-1.20m SANDY CLAY BROWN 1.20m-2.70m CLAY GREY 2.70m-3.00m SANDY CLAY SATURATED 3.00m-4.60m CLAY GREY 4.60m-4.90m SANDY CLAY SATURATED FINE GRAIN 4.90m-7.80m SANDSTONE COARSE GRAIN	1750m	North West

Drill Log Data Source: NSW Department of Primary Industries - Office of Water / Water Administration Ministerial Corp  
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# Geology 1:100,000

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



## Geology

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Geological Units

What are the Geological Units onsite?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Psud	melanocratic, coarse-grained and porphyritic latite	Dapto Latite Member	Shoalhaven Group				Wollongong & Port Hacking	1:100,000
Qal	quartz and lithic "fluvial" sand, silt, and clay						Wollongong & Port Hacking	1:100,000

What are the Geological Units within the dataset buffer?

Symbol	Description	Unit Name	Group	Sub Group	Age	Dom Lith	Map Sheet	Dataset
Pip	interbedded lithic-sandstone, coal, carbonaceous claystone, siltstone, and claystone	Pheasants Nest Formation	Illawarra Coal Measures	Cumberland SubGroup			Wollongong & Port Hacking	1:100,000
Psu	red, brown, and grey lithic sandstone	Budgong Sandstone	Shoalhaven Group				Wollongong & Port Hacking	1:100,000
Psud	melanocratic, coarse-grained and porphyritic latite	Dapto Latite Member	Shoalhaven Group				Wollongong & Port Hacking	1:100,000
Qal	quartz and lithic "fluvial" sand, silt, and clay						Wollongong & Port Hacking	1:100,000

## Geological Structures

What are the Geological Structures onsite?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

What are the Geological Structures within the dataset buffer?

Feature	Name	Description	Map Sheet	Dataset
No features				1:100,000

Geological Data Source : NSW Department of Industry, Resources & Energy

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# Naturally Occurring Asbestos Potential

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Naturally Occurring Asbestos Potential

Naturally Occurring Asbestos Potential within the dataset buffer:

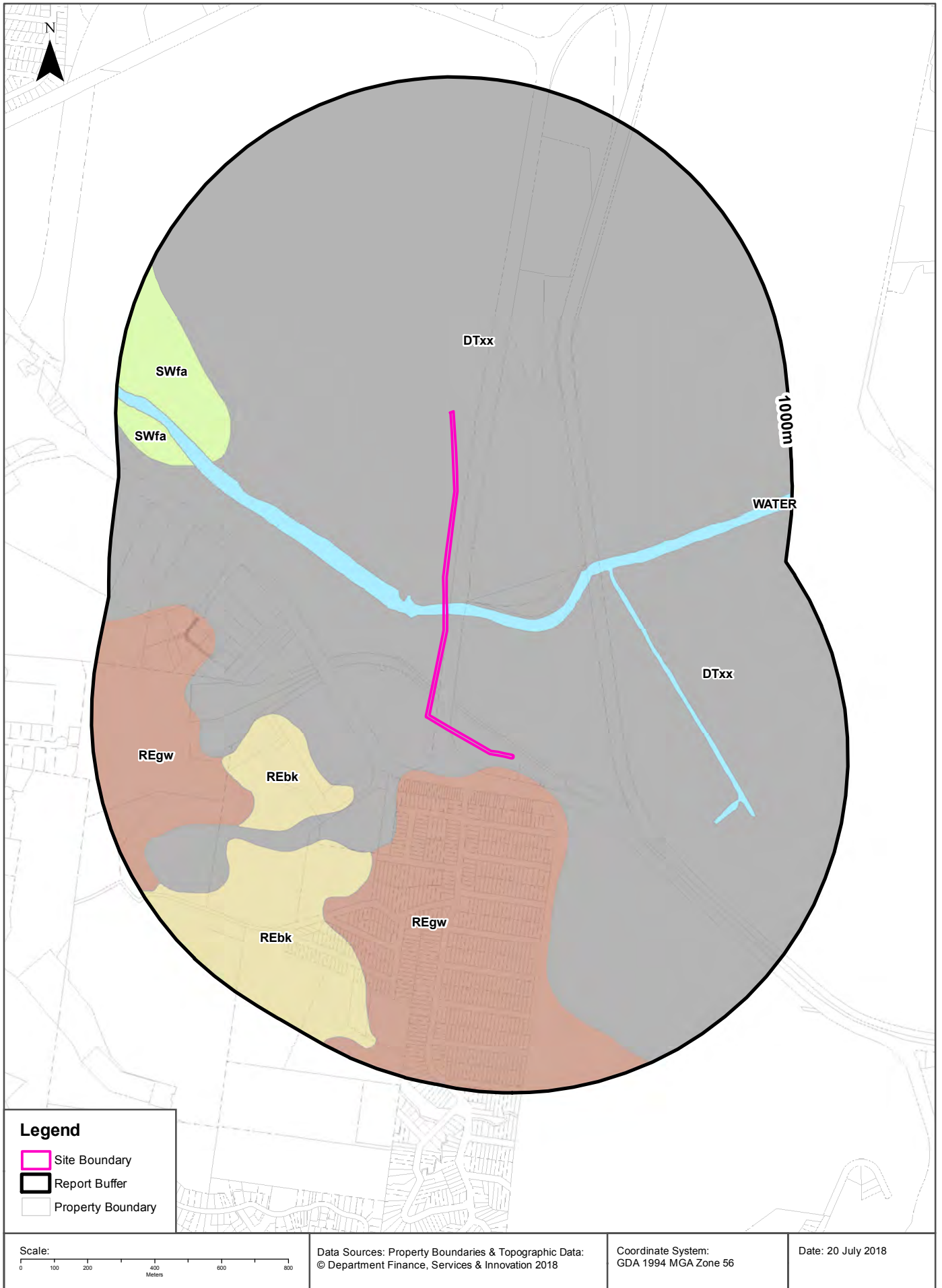
Potential	Sym	Strat Name	Group	Formation	Scale	Min Age	Max Age	Rock Type	Dom Lith	Description	Dist	Dir
No records in buffer												

Mining Subsidence District Data Source: © State of New South Wales through NSW Department of Industry, Resources & Energy



# Soil Landscapes

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



## Soils

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Soil Landscapes

What are the onsite Soil Landscapes?

Soil Code	Name	Group	Process	Map Sheet	Scale
DTxx	DISTURBED TERRAIN		DISTURBED TERRAIN	Wollongong & Port Hacking	1:100,000
WATER	WATER		WATER	Wollongong & Port Hacking	1:100,000

What are the Soil Landscapes within the dataset buffer?

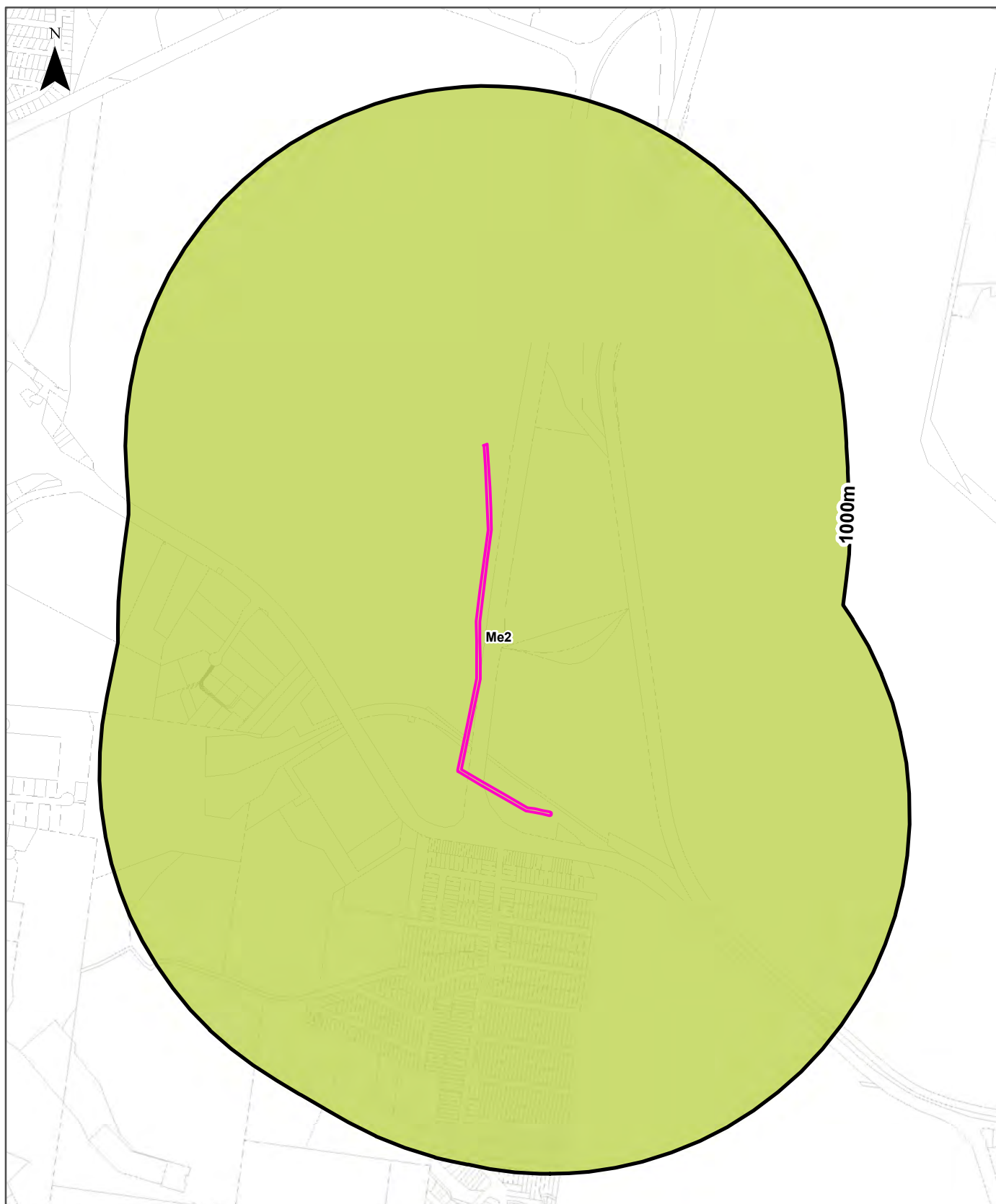
Soil Code	Name	Group	Process	Map Sheet	Scale
DTxx	DISTURBED TERRAIN		DISTURBED TERRAIN	Wollongong & Port Hacking	1:100,000
REbk	BERKELEY		RESIDUAL	Wollongong & Port Hacking	1:100,000
REgw	GWYNNEVILLE		RESIDUAL	Wollongong & Port Hacking	1:100,000
SWfa	FAIRY MEADOW		SWAMP	Wollongong & Port Hacking	1:100,000
WATER	WATER		WATER	Wollongong & Port Hacking	1:100,000

Soils Landscapes Data Source : NSW Office of Environment and Heritage

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# Atlas of Australian Soils

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



<b>Legend</b> Site Boundary Report Buffer Property Boundary		<b>Australian Soil Classification Orders</b> <table border="0"> <tr> <td> Anthroisol</td> <td> Dermosol</td> <td> Kandosol</td> <td> Podosol</td> <td> Tenosol</td> <td> No Data</td> </tr> <tr> <td> Calcarosol</td> <td> Ferrosol</td> <td> Kurosol</td> <td> Rudosol</td> <td> Vertosol</td> <td></td> </tr> <tr> <td> Chromosol</td> <td> Hydrosol</td> <td> Organosol</td> <td> Sodosol</td> <td> Lake</td> <td></td> </tr> </table>						Anthroisol	Dermosol	Kandosol	Podosol	Tenosol	No Data	Calcarosol	Ferrosol	Kurosol	Rudosol	Vertosol		Chromosol	Hydrosol	Organosol	Sodosol	Lake	
Anthroisol	Dermosol	Kandosol	Podosol	Tenosol	No Data																				
Calcarosol	Ferrosol	Kurosol	Rudosol	Vertosol																					
Chromosol	Hydrosol	Organosol	Sodosol	Lake																					
<b>Scale:</b> 		Data Sources: Property Boundaries & Topographic Data: © Department Finance, Services & Innovation 2018		Coordinate System: GDA 1994 MGA Zone 56		Date: 20 July 2018																			

## Soils

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Atlas of Australian Soils

Soil mapping units and Australian Soil Classification orders within the dataset buffer:

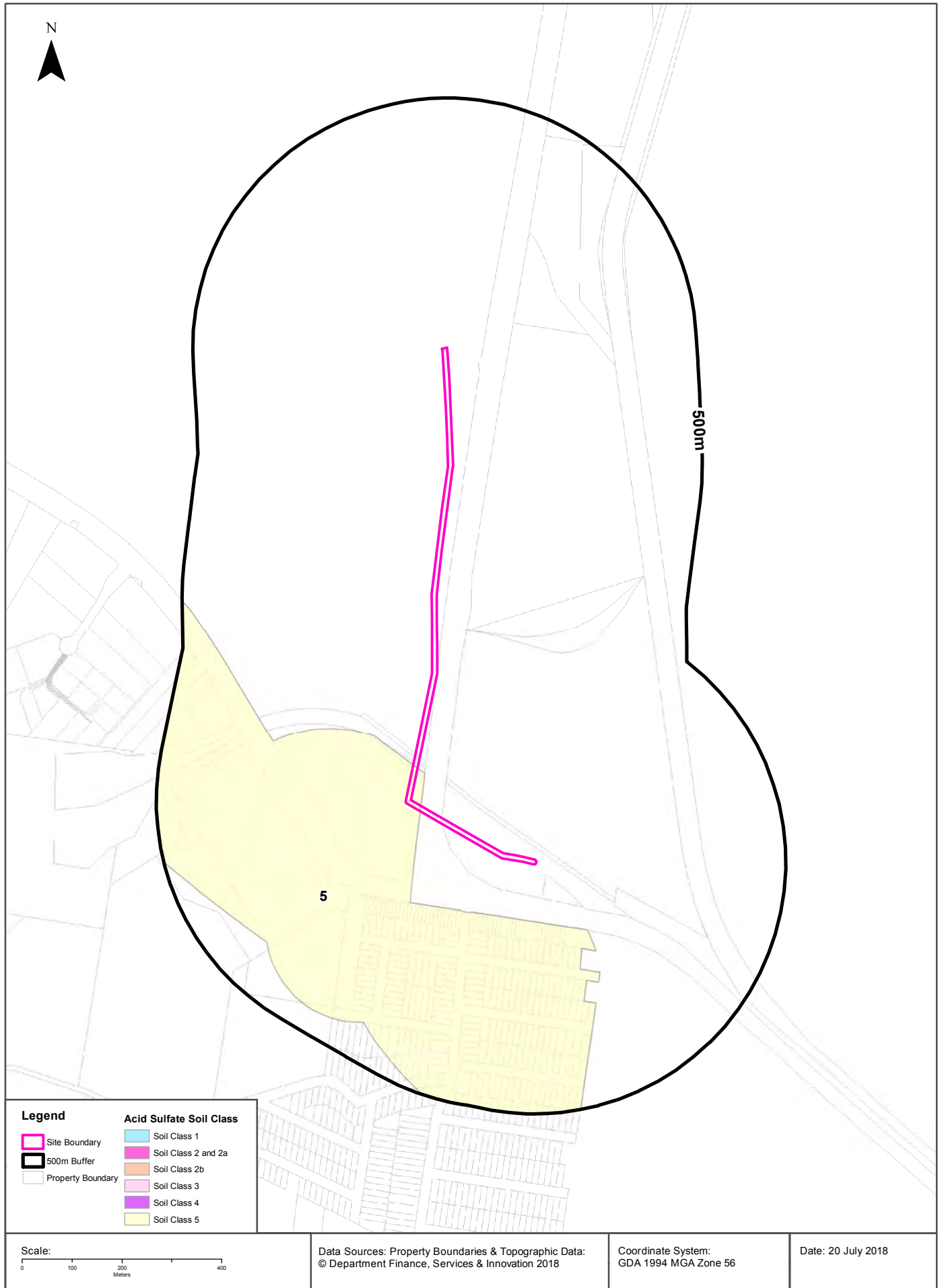
Map Unit Code	Soil Order	Map Unit Description	Distance
Me2	Dermosol	Steep hilly to mountainous with incised stream valleys: steep but more or less rounded hill slopes of brown friable earths (Gn3.21 and Gn3.22) and possibly some (Gn4) soils, in association with: at the higher altitudes, steep hill slopes of sandy soils (Uc4.2), loamy soils having an A2 horizon (Um4.2) with yellow-brown earths (Gn2.44), and possibly (Uc6.11) and (Um5.41) soils; and at the lower altitudes, moderate to steep slopes of hard acidic yellow mottled soils (Dy3.21 and Dy3.41), hard acidic red soils (Dr2.21), and yellow leached friable earths (Gn3.54); and narrow incised stream valleys of various soils including (Um6.11) and (Dy) soils. This unit is a broad one. In some areas the (Um4.2) and (Gn2.44) soils and in others the (Dy) and (Dr) soils rather than the (Gn3) soils could be dominant.	0m

Atlas of Australian Soils Data Source: CSIRO

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# Acid Sulfate Soils

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



## Acid Sulfate Soils

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Standard Local Environmental Plan Acid Sulfate Soils

What is the on-site Acid Sulfate Soil Plan Class that presents the largest environmental risk?

Soil Class	Description	LEP
5	Works within 500 metres of adjacent Class 1, 2, 3, or 4 land that is below 5 metres AHD and by which the watertable is likely to be lowered below 1 metre AHD on adjacent Class 1, 2, 3 or 4 land, present an environmental risk	Wollongong Local Environmental Plan 2009

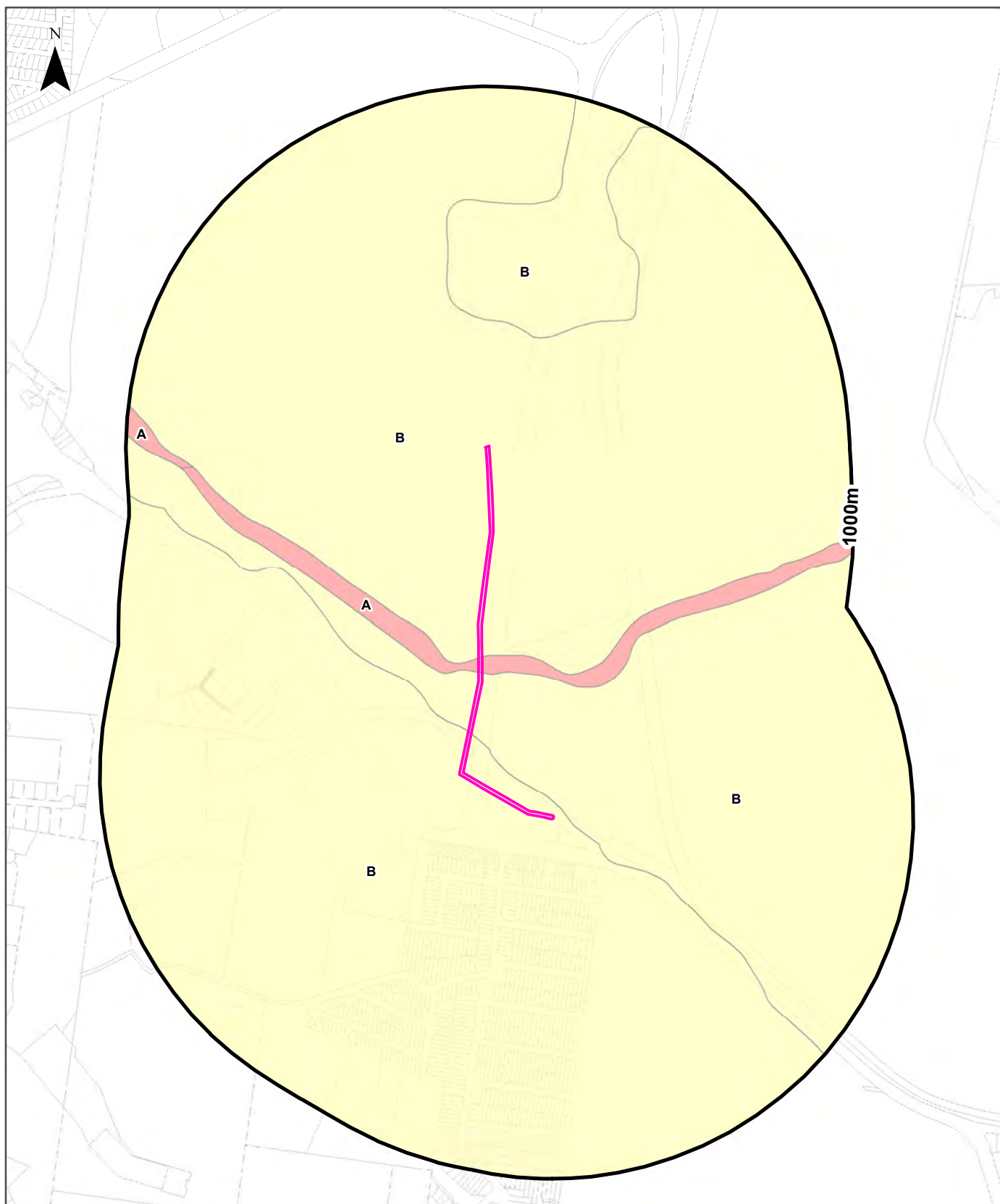
If the on-site Soil Class is 5, what other soil classes exist within 500m?

Soil Class	Description	LEP	Distance	Direction
None				

Acid Sulfate Data Source Accessed 07/10/2016: NSW Crown Copyright - Planning and Environment  
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# Atlas of Australian Acid Sulfate Soils

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



<b>Legend</b>			
Site Boundary	<b>Probability of occurrence of Acid Sulfate Soils</b>		
Report Buffer	A. High (>70%)	C. Extremely Low (1-5%)	No Data
Property Boundary	B. Low (6-70%)	D. No Chance (0%)	
<b>Scale:</b> 0 100 200 400 600 800 Meters	Data Sources: Property Boundaries & Topographic Data. © Department Finance, Services & Innovation 2018	Coordinate System: GDA 1994 MGA Zone 56	Date: 20 July 2018

## Acid Sulfate Soils

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### Atlas of Australian Acid Sulfate Soils

Atlas of Australian Acid Sulfate Soil categories within the dataset buffer:

Class	Description	Distance
A	High Probability of occurrence. >70% chance of occurrence.	0m
B	Low Probability of occurrence. 6-70% chance of occurrence.	0m

Atlas of Australian Acid Sulfate Soils Data Source: CSIRO

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## Dryland Salinity

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Dryland Salinity - National Assessment

Is there Dryland Salinity - National Assessment data onsite?

**No**

Is there Dryland Salinity - National Assessment data within the dataset buffer?

**No**

What Dryland Salinity assessments are given?

Assessment 2000	Assessment 2020	Assessment 2050	Distance	Direction
N/A	N/A	N/A	N/A	N/A

Dryland Salinity Data Source : National Land and Water Resources Audit

The Commonwealth and all suppliers of source data used to derive the maps of "Australia, Forecast Areas Containing Land of High Hazard or Risk of Dryland Salinity from 2000 to 2050" do not warrant the accuracy or completeness of information in this product. Any person using or relying upon such information does so on the basis that the Commonwealth and data suppliers shall bear no responsibility or liability whatsoever for any errors, faults, defects or omissions in the information. Any persons using this information do so at their own risk.

In many cases where a high risk is indicated, less than 100% of the area will have a high hazard or risk.

## Dryland Salinity Potential of Western Sydney

Dryland Salinity Potential of Western Sydney within the dataset buffer?

Feature Id	Classification	Description	Distance	Direction
N/A	Outside Data Coverage			

Dryland Salinity Potential of Western Sydney Data Source : NSW Office of Environment and Heritage

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# Mining Subsidence Districts

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Mining Subsidence Districts

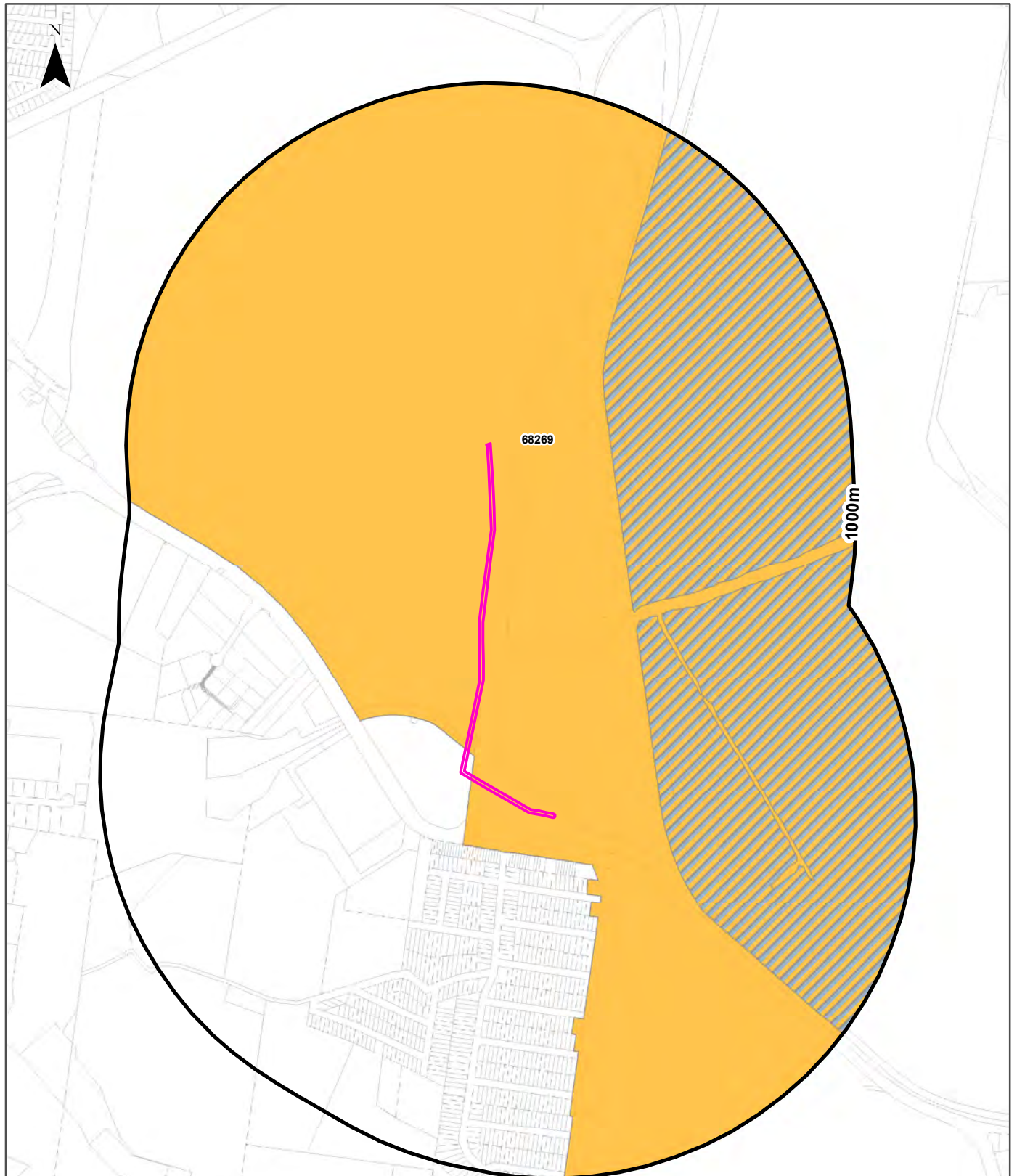
Mining Subsidence Districts within the dataset buffer:

District	Distance	Direction
There are no Mining Subsidence Districts within the report buffer		

Mining Subsidence District Data Source: © Land and Property Information (2016)  
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# State Environmental Planning Policy

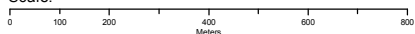
Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



## Legend

- |                   |                                |   |
|-------------------|--------------------------------|---|
| Site Boundary     | SEPP 14 - Coastal Wetlands     | Strategic Land Use - Future Residential Growth Areas        |
| Report Buffer     | SEPP 26 - Littoral Rainforests | Strategic Land Use - Additional Rural Village Land          |
| Property Boundary | SEPP 71 - Coastal Protection   | Strategic Land Use -Biophysical Strategic Agricultural Land |
|                   | SEPP Major Developments 2005   | Strategic Land Use -Critical Industry Cluster (Equine)      |
|                   |                                | Strategic Land Use -Critical Industry Cluster (Viticulture) |

Scale:



Data Sources: Property Boundaries & Topographic Data:  
© Department Finance, Services & Innovation 2018

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 20 July 2018

## Environmental Zoning

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## State Environmental Planning Policy Protected Areas

Are there any State Environmental Planning Policy Protected Areas onsite or within the dataset buffer?

Dataset	Onsite	Within Site Buffer	Distance
SEPP14 - Coastal Wetlands	No	No	N/A
SEPP26 - Littoral Rainforests	No	No	N/A
SEPP71 - Coastal Protection Zone	No	Yes	293m

SEPP Protected Areas Data Source: NSW Department of Planning & Environment  
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## State Environmental Planning Policy Major Developments (2005)

State Environmental Planning Policy Major Developments within the dataset buffer:

Map Id	Feature	Effective Date	Distance	Direction
68269	Three Ports - Port Kembla	24/07/2009	0m	Onsite

SEPP Major Development Data Source: NSW Department of Planning & Environment  
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## State Environmental Planning Policy Strategic Land Use Areas

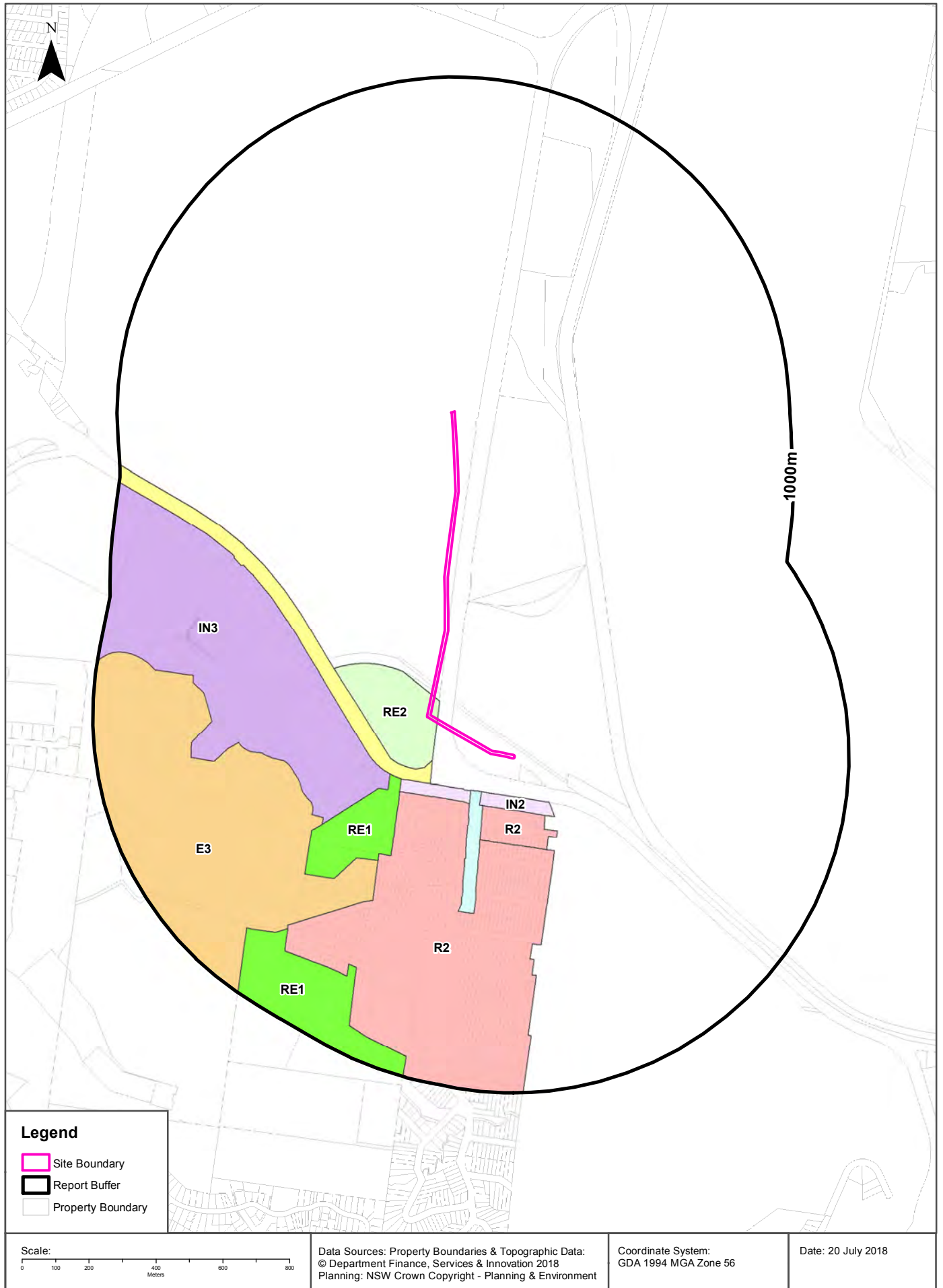
State Environmental Planning Policy Strategic Land Use Areas onsite or within the dataset buffer:

Strategic Land Use	SEPPNo	Effective Date	Amendment	Amendment Year	Distance	Direction
No records within buffer						

SEPP Strategic Land Use Data Source: NSW Department of Planning & Environment  
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# LEP Planning Zones

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



# Local Environmental Plan

## Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### Land Zoning

What Local Environmental Plan Land Zones exist within the dataset buffer?

Zone	Description	Purpose	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Distance	Direction
RE2	Private Recreation		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		0m	Onsite
SP2	Infrastructure	Road	Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		104m	North
IN2	Light Industrial		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		112m	South
B1	Neighbourhood Centre		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		116m	South
IN2	Light Industrial		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		125m	South
R2	Low Density Residential		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		153m	South
R2	Low Density Residential		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		161m	South
RE1	Public Recreation		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		200m	South West
IN3	Heavy Industrial		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		204m	West
E3	Environmental Management		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		429m	South West
RE1	Public Recreation		Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		754m	South

Local Environment Plan Data Source: NSW Crown Copyright - Planning & Environment

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## Local Environmental Plan

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### Minimum Subdivision Lot Size

What are the onsite Local Environmental Plan Minimum Subdivision Lot Sizes?

Symbol	Minimum Lot Size	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

### Maximum Height of Building

What are the onsite Local Environmental Plan Maximum Height of Buildings?

Symbol	Maximum Height of Building	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
10	9.00 m	Wollongong Local Environmental Plan 2009	26/02/2010	26/02/2010	16/02/2018		8.3

### Floor Space Ratio

What are the onsite Local Environmental Plan Floor Space Ratios?

Symbol	Floor Space Ratio	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
No Data							

### Land Application

What are the onsite Local Environmental Plan Land Applications?

Application Type	LEP or SEPP	Published Date	Commenced Date	Currency Date	Amendment	Percentage of Site Area
Included	Wollongong Local Environmental Plan 2009	06/06/2014	06/06/2014	06/06/2014	Amendment No 15	8.28

### Land Reservation Acquisition

What are the onsite Local Environmental Plan Land Reservation Acquisitions?

Reservation	LEP	Published Date	Commenced Date	Currency Date	Amendment	Comments	Percentage of Site Area
No Data							

Local Environment Plan Data Source: NSW Crown Copyright - Planning & Environment  
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# Heritage

## Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### State Heritage Items

What are the State Heritage Items located within the dataset buffer?

Map Id	Name	Address	LGA	Listing Date	Listing No	Plan No	Distance	Direction
N/A	No records in buffer							

Heritage Data Source: NSW Crown Copyright - Planning & Environment  
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### Local Heritage Items

What are the Local Heritage Items located within the dataset buffer?

Map Id	Name	Classification	Significance	LEP or Act	Published Date	Commenced Date	Currency Date	Distance	Direction
N/A	No records in buffer								

Heritage Data Source: NSW Crown Copyright - Planning & Environment  
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## Natural Hazards

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### Bush Fire Prone Land

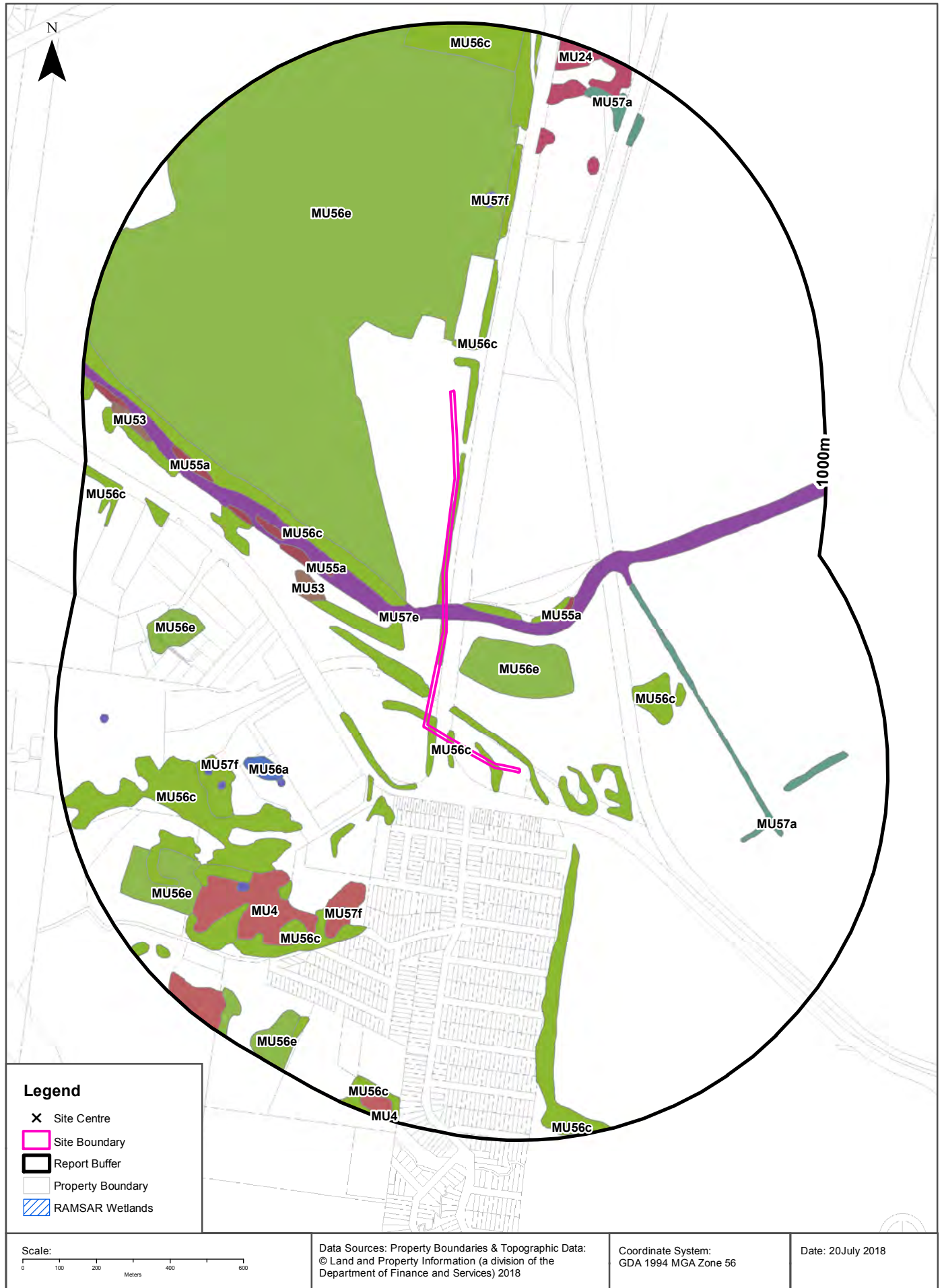
What are the nearest Bush Fire Prone Land Categories that exist within the dataset buffer?

Bush Fire Prone Land Category	Distance	Direction
No records within buffer		

NSW Bush Fire Prone Land - © NSW Rural Fire Service under Creative Commons 4.0 International Licence

# Ecological Constraints - Vegetation & RAMSAR Wetlands

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



## Ecological Constraints

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

## Native Vegetation of the Illawarra Escarpment & Coastal Plain

What Native Vegetation of the Illawarra Escarpment & Coastal Plain exists within the dataset buffer?

Veg Code	Vegetation Community	Disturbance Class	Disturbance Type	Understorey	Broad Vegetation Type	Endangered Ecological Community	Distance	Direction
MU56c	Weeds and Exotics	Weeds and Exotics			Weeds and Exotics		0m	Onsite
MU57e	Estuarine Lagoons and Channels	Unassessed			Wetlands		0m	Onsite
MU56e	Modified Lands	Weeds and Exotics			Cleared		53m	South East
MU55a	Seagrass Meadows and Estuarine Flats	Unassessed			Seagrass		274m	East
MU53	Estuarine Alluvial Wetland	Unassessed			Native Vegetation	Sydney Coastal Estuary Swamp Complex	317m	West
MU56a	Acacia Scrub	Acacia Scrub			Regenerating Vegetation		399m	South West
MU57f	Fig Trees	Scattered Trees			Scattered Trees		405m	South West
MU4	Lowland Dry-Subtropical Rainforest	High Disturbance		Weeds	Native Vegetation		452m	South
MU57a	Artificial Wetlands	Unassessed			Wetlands		495m	South East
MU24	Lowland Woollybutt-Melaleuca Forest	Scattered Trees			Scattered Trees	Illawarra Coastal Grassy Woodlands	680m	North
MU4	Lowland Dry-Subtropical Rainforest	High Disturbance	Weeds	Acacia Dominant	Native Vegetation		903m	South West
MU24	Lowland Woollybutt-Melaleuca Forest	Moderate Disturbance	Weeds	Melaleuca Dominant	Native Vegetation	Illawarra Coastal Grassy Woodlands	912m	North
MU4	Lowland Dry-Subtropical Rainforest	High Disturbance	Weeds	Lantana	Native Vegetation		942m	South

Native Vegetation of the Illawarra Escarpment & Coastal Plain : NSW Office of Environment and Heritage  
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## RAMSAR Wetlands

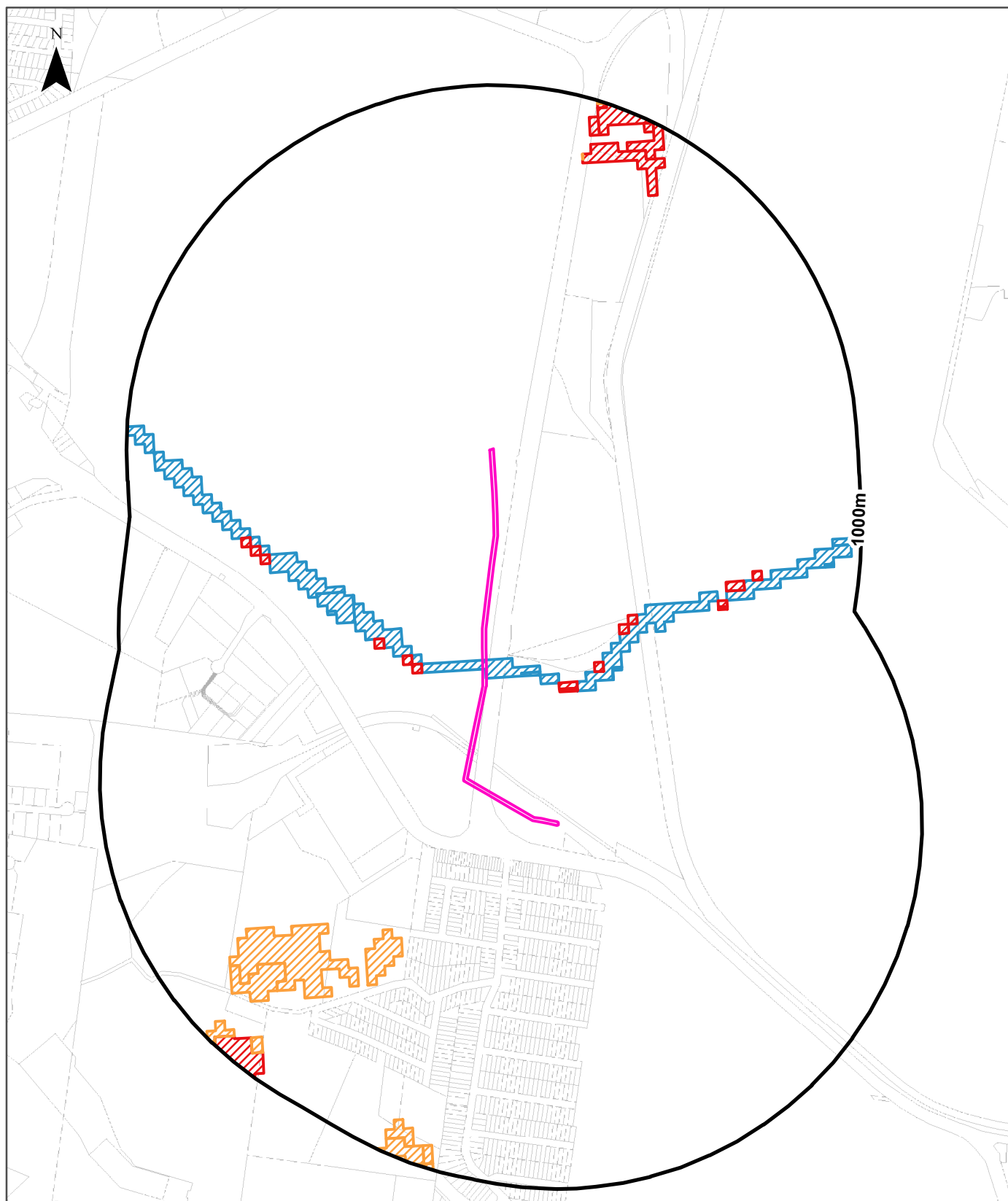
What RAMSAR Wetland areas exist within the dataset buffer?

Map Id	RAMSAR Name	Wetland Name	Designation Date	Source	Distance	Direction
N/A	No records in buffer					

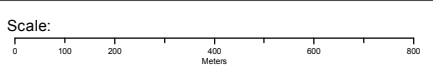
RAMSAR Wetlands Data Source: © Commonwealth of Australia - Department of Environment

# Ecological Constraints - Groundwater Dependent Ecosystems Atlas

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



Legend					
	Site Boundary		High potential GDE - from national assessment		Low potential GDE - from national assessment
	Report Buffer		High potential GDE - from regional studies		Low potential GDE - from regional studies
	Property Boundaries		Moderate potential GDE - from national assessment		Known GDE - from regional studies
			Moderate potential GDE - from regional studies		Unclassified potential GDE - from national assessment
					Unclassified potential GDE - from regional studies



Data Sources: Property Boundaries & Topographic Data:  
© Department Finance, Services & Innovation 2018

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 20 July 2018

# Ecological Constraints

## Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### Groundwater Dependent Ecosystems Atlas

Type	GDE Potential	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	Low potential GDE - from regional studies	Deeply dissected sandstone plateaus.	Vegetation		0m
Terrestrial	High potential GDE - from regional studies	Deeply dissected sandstone plateaus.	Vegetation		166m
Terrestrial	Moderate potential GDE - from regional studies	Deeply dissected sandstone plateaus.	Vegetation		452m

Groundwater Dependent Ecosystems Atlas Data Source: The Bureau of Meteorology  
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# Ecological Constraints - Inflow Dependent Ecosystems Likelihood

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)



## Ecological Constraints

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

#### Inflow Dependent Ecosystems Likelihood

Type	IDE Likelihood	Geomorphology	Ecosystem Type	Aquifer Geology	Distance
Terrestrial	8	Deeply dissected sandstone plateaus.	Vegetation		0m
Terrestrial	7	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		96m
Terrestrial	2	Deeply dissected sandstone plateaus.	Vegetation		166m
Terrestrial	6	Deeply dissected steeply sloping plateau margin in metamorphics and granite. Bounded in the west by the Great Escarpment.	Vegetation		200m
Terrestrial	5	Deeply dissected sandstone plateaus.	Vegetation		452m
Terrestrial	3	Deeply dissected sandstone plateaus.	Vegetation		616m
Terrestrial	4	Deeply dissected sandstone plateaus.	Vegetation		702m

Inflow Dependent Ecosystems Likelihood Data Source: The Bureau of Meteorology  
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# Ecological Constraints

## Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 1)

### NSW BioNet Atlas

Species on the NSW BioNet Atlas that have a NSW or federal conservation status, a NSW sensitivity status, or are listed under a migratory species agreement, and are within 10km of the site?

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Amphibia	Litoria aurea	Green and Golden Bell Frog	Endangered	Not Sensitive	Vulnerable	
Animalia	Amphibia	Litoria littlejohni	Littlejohn's Tree Frog	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Amphibia	Pseudophryne australis	Red-crowned Toadlet	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Actitis hypoleucos	Common Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Anseranas semipalmata	Maggie Goose	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Not Sensitive	Critically Endangered	
Animalia	Aves	Apus pacificus	Fork-tailed Swift	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Ardea ibis	Cattle Egret	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Ardenna carneipes	Flesh-footed Shearwater	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Ardenna grisea	Sooty Shearwater	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Ardenna pacificus	Wedge-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Ardenna tenuirostris	Short-tailed Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Arenaria interpres	Ruddy Turnstone	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Artamus cyanopterus cyanopterus	Dusky Woodswallow	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Botaurus poiciloptilus	Australasian Bittern	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Calidris acuminata	Sharp-tailed Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris alba	Sanderling	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris canutus	Red Knot	Not Listed	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris ferruginea	Curllew Sandpiper	Endangered	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris melanotos	Pectoral Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Calidris ruficollis	Red-necked Stint	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calidris tenuirostris	Great Knot	Vulnerable	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Callocephalon fimbriatum	Gang-gang Cockatoo	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Calonectris leucomelas	Streaked Shearwater	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Calyptrorhynchus lathamii	Glossy Black-Cockatoo	Vulnerable	Category 2	Not Listed	
Animalia	Aves	Charadrius leschenaultii	Greater Sand-plover	Vulnerable	Not Sensitive	Vulnerable	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Charadrius mongolus	Lesser Sand-plover	Vulnerable	Not Sensitive	Endangered	ROKAMBA;CAMBA; JAMBA



Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Chlidonias leucopterus	White-winged Black Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Coracina lineata	Barred Cuckoo-shrike	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Daphoenositta chrysoptera	Varied Sittella	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Diomedea exulans	Wandering Albatross	Endangered	Not Sensitive	Endangered	JAMBA
Animalia	Aves	Diomedea gibsoni	Gibson's Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Egretta sacra	Eastern Reef Egret	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Ephippiorhynchus asiaticus	Black-necked Stork	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Epthianura albifrons	White-fronted Chat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Fregata ariel	Lesser Frigatebird	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Gallinago hardwickii	Latham's Snipe	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Grantiella picta	Painted Honeyeater	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Gygis alba	White Tern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus fuliginosus	Sooty Oystercatcher	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Haematopus longirostris	Pied Oystercatcher	Endangered	Not Sensitive	Not Listed	
Animalia	Aves	Haliaeetus leucogaster	White-bellied Sea-Eagle	Vulnerable	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Hieraaetus morphnoides	Little Eagle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Hirundapus caudacutus	White-throated Needletail	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Hydroprogne caspia	Caspian Tern	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Ixobrychus flavicollis	Black Bittern	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Lathamus discolor	Swift Parrot	Endangered	Category 3	Critically Endangered	
Animalia	Aves	Limicola falcinellus	Broad-billed Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa lapponica	Bar-tailed Godwit	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Limosa limosa	Black-tailed Godwit	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Lophoictinia isura	Square-tailed Kite	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Macronectes giganteus	Southern Giant Petrel	Endangered	Not Sensitive	Endangered	
Animalia	Aves	Macronectes halli	Northern Giant-Petrel	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Melithreptus gularis gularis	Black-chinned Honeyeater (eastern subspecies)	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Neophema pulchella	Turquoise Parrot	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox connivens	Barking Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Ninox strenua	Powerful Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Numenius madagascariensis	Eastern Curlew	Not Listed	Not Sensitive	Critically Endangered	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Numenius phaeopus	Whimbrel	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA; JAMBA
Animalia	Aves	Onychoprion fuscata	Sooty Tern	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Aves	Oxyura australis	Blue-billed Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pachycephala olivacea	Olive Whistler	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Pandion cristatus	Eastern Osprey	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Petroica phoenicea	Flame Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Petroica rodinogaster	Pink Robin	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Phaethon lepturus	White-tailed Tropicbird	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Plegadis falcinellus	Glossy Ibis	Not Listed	Not Sensitive	Not Listed	CAMBA
Animalia	Aves	Pluvialis fulva	Pacific Golden Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Pluvialis squatarola	Grey Plover	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Polytelis anthopeplus monarchoides	Regent Parrot (eastern subspecies)	Endangered	Category 3	Vulnerable	
Animalia	Aves	Polytelis swainsonii	Superb Parrot	Vulnerable	Category 3	Vulnerable	
Animalia	Aves	Pterodroma leucoptera leucoptera	Gould's Petrel	Vulnerable	Not Sensitive	Endangered	
Animalia	Aves	Ptilinopus magnificus	Wompoo Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus regina	Rose-crowned Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Ptilinopus superbis	Superb Fruit-Dove	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Puffinus assimilis	Little Shearwater	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Stercorarius parasiticus	Arctic Jaeger	Not Listed	Not Sensitive	Not Listed	ROKAMBA;JAMBA
Animalia	Aves	Stercorarius pomarinus	Pomarine Jaeger	Not Listed	Not Sensitive	Not Listed	CAMBA;JAMBA
Animalia	Aves	Sterna hirundo	Common Tern	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Sternula albifrons	Little Tern	Endangered	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Stictonetta naevosa	Freckled Duck	Vulnerable	Not Sensitive	Not Listed	
Animalia	Aves	Sula leucogaster	Brown Booby	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Thalassarche impavida	Campbell Albatross	Not Listed	Not Sensitive	Vulnerable	
Animalia	Aves	Thalassarche melanophris	Black-browed Albatross	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Aves	Thinornis rubricollis	Hooded Plover	Critically Endangered	Not Sensitive	Vulnerable	
Animalia	Aves	Tringa brevipes	Grey-tailed Tattler	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tringa incana	Wandering Tattler	Not Listed	Not Sensitive	Not Listed	JAMBA
Animalia	Aves	Tringa nebularia	Common Greenshank	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tringa stagnatilis	Marsh Sandpiper	Not Listed	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Aves	Tyto novaehollandiae	Masked Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Tyto tenebricosa	Sooty Owl	Vulnerable	Category 3	Not Listed	
Animalia	Aves	Xenus cinereus	Terek Sandpiper	Vulnerable	Not Sensitive	Not Listed	ROKAMBA;CAMBA;JAMBA
Animalia	Mammalia	Arctocephalus pusillus doriferus	Australian Fur-seal	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Cercartetus nanus	Eastern Pygmy-possum	Vulnerable	Not Sensitive	Not Listed	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Animalia	Mammalia	Chalinolobus dwyeri	Large-eared Pied Bat	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Dasyurus maculatus	Spotted-tailed Quoll	Vulnerable	Not Sensitive	Endangered	
Animalia	Mammalia	Dasyurus viverrinus	Eastern Quoll	Endangered	Not Sensitive	Endangered	
Animalia	Mammalia	Dugong dugon	Dugong	Endangered	Not Sensitive	Not Listed	
Animalia	Mammalia	Falsistrellus tasmaniensis	Eastern False Pipistrelle	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Megaptera novaeangliae	Humpback Whale	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Miniopterus australis	Little Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Miniopterus schreibersii oceanensis	Eastern Bentwing-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Mormopterus norfolkensis	Eastern Freetail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Myotis macropus	Southern Myotis	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Petauroides volans	Greater Glider	Not Listed	Not Sensitive	Vulnerable	
Animalia	Mammalia	Phascolarctos cinereus	Koala	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Physeter macrocephalus	Sperm Whale	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Pteropus poliocephalus	Grey-headed Flying-fox	Vulnerable	Not Sensitive	Vulnerable	
Animalia	Mammalia	Saccolaimus flaviventris	Yellow-bellied Sheath-tail-bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Mammalia	Scoteanax rueppellii	Greater Broad-nosed Bat	Vulnerable	Not Sensitive	Not Listed	
Animalia	Reptilia	Caretta caretta	Loggerhead Turtle	Endangered	Not Sensitive	Endangered	
Animalia	Reptilia	Chelonia mydas	Green Turtle	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	Acacia baueri subsp. aspera		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Acacia bynoeana	Bynoe's Wattle	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Arthropteris palisotii	Lesser Creeping Fern	Endangered	Category 3	Not Listed	
Plantae	Flora	Chorizema parviflorum	Eastern Flame Pea	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Cynanchum elegans	White-flowered Wax Plant	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Epacris purpurascens subsp. purpurascens		Vulnerable	Not Sensitive	Not Listed	
Plantae	Flora	Eucalyptus largeana	Craven Grey Box	Endangered	Not Sensitive	Endangered	
Plantae	Flora	Eucalyptus scoparia	Wallangarra White Gum	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Gossia acmenoides	Scrub Ironwood	Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Lespedeza juncea subsp. sericea		Endangered Population	Not Sensitive	Not Listed	
Plantae	Flora	Macadamia integrifolia	Macadamia Nut	Not Listed	Not Sensitive	Vulnerable	
Plantae	Flora	Parsonia dorrigoensis	Milky Silkpod	Vulnerable	Not Sensitive	Endangered	
Plantae	Flora	Persoonia glaucescens	Mittagong Geebung	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	Persoonia hirsuta	Hairy Geebung	Endangered	Category 3	Endangered	
Plantae	Flora	Pimelea spicata	Spiked Rice-flower	Endangered	Not Sensitive	Endangered	

Kingdom	Class	Scientific	Common	NSW Conservation Status	NSW Sensitivity Class	Federal Conservation Status	Migratory Species Agreements
Plantae	Flora	<i>Pultenaea aristata</i>	Prickly Bush-pea	Vulnerable	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Senna acclinis</i>	Rainforest Cassia	Endangered	Not Sensitive	Not Listed	
Plantae	Flora	<i>Solanum celatum</i>		Endangered	Not Sensitive	Not Listed	
Plantae	Flora	<i>Syzygium paniculatum</i>	Magenta Lilly Pilly	Endangered	Not Sensitive	Vulnerable	
Plantae	Flora	<i>Zieria granulata</i>	Illawarra Zieria	Endangered	Not Sensitive	Endangered	

Data does not include NSW category 1 sensitive species.

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Data obtained 20/07/2018

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# LOTSEARCH

LOTSEARCH ENVIRO PROFESSIONAL

**Date: 20 Jul 2018 10:11:27**

**Reference: LS003865**

**Address: Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)**

**Disclaimer:**

The purpose of this report is to provide an overview of some of the site history, environmental risk and planning information available, affecting an individual address or geographical area in which the property is located. It is not a substitute for an on-site inspection or review of other available reports and records. It is not intended to be, and should not be taken to be, a rating or assessment of the desirability or market value of the property or its features. You should obtain independent advice before you make any decision based on the information within the report. The detailed terms applicable to use of this report are set out at the end of this report.

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## Location Confidences

Where Lotsearch has had to georeference features from supplied addresses, a location confidence has been assigned to the data record. This indicates a confidence to the positional accuracy of the feature. Where applicable, a code is given under the field heading “LC” or “LocConf”. These codes lookup to the following location confidences:

LC Code	Location Confidence
1	Georeferenced to the site location / premise or part of site
2	Georeferenced with the confidence of the general/approximate area
3	Georeferenced to the road or rail
4	Georeferenced to the road intersection
5	Feature is a buffered point
6	Land adjacent to Georeferenced Site
7	Georeferenced to a network of features

## Dataset Listing

Datasets contained within this report, detailing their source and data currency:

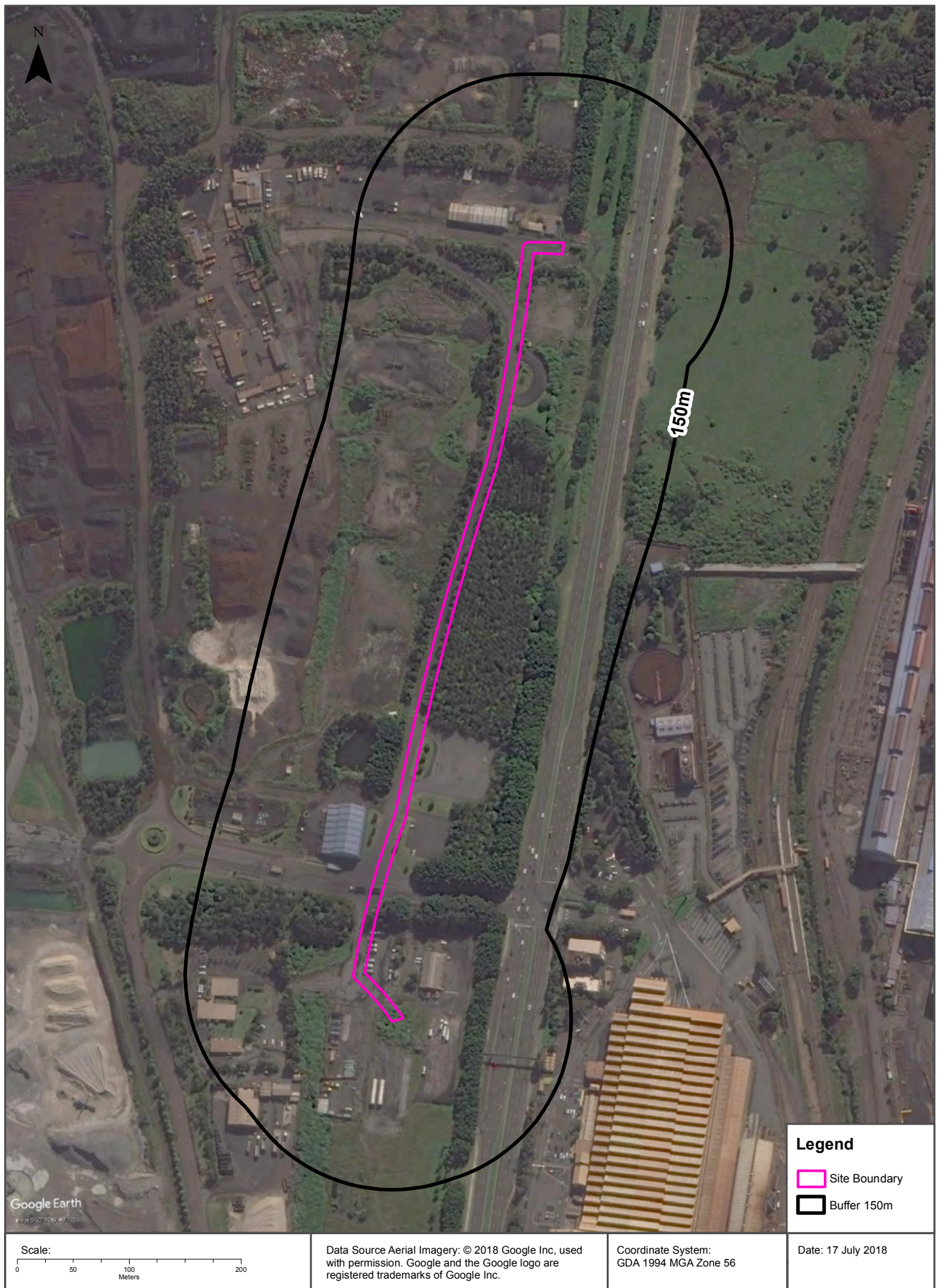
Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Cadastre Boundaries	Dept. Finance, Services & Innovation	20/07/2018	20/07/2018	Daily	-	-	-	-
Topographic Data	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	As required	-	-	-	-
List of NSW contaminated sites notified to EPA	Environment Protection Authority	06/07/2018	02/07/2018	Monthly	1000	2	2	6
Contaminated Land Records of Notice	Environment Protection Authority	06/07/2018	06/07/2018	Monthly	1000	1	1	2
Former Gasworks	Environment Protection Authority	04/07/2018	11/10/2017	Monthly	1000	0	0	0
National Waste Management Site Database	Geoscience Australia	04/07/2018	07/03/2017	Quarterly	1000	0	0	1
EPA PFAS Investigation Program	Environment Protection Authority	04/07/2018	04/07/2018	Monthly	2000	0	0	0
EPA Other Sites with Contamination Issues	Environment Protection Authority	11/01/2018	11/01/2018	Quarterly	1000	0	0	0
Licensed Activities under the POEO Act 1997	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	18	18	34
Delicensed POEO Activities still Regulated by the EPA	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	1	1	4
Former POEO Licensed Activities now revoked or surrendered	Environment Protection Authority	13/07/2018	13/07/2018	Monthly	1000	0	0	4
UPSS Environmentally Sensitive Zones	Environment Protection Authority	14/04/2015	12/01/2010	As required	1000	0	1	1
UBD Business Directory 1982 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1982 (Road & Area Matches)	Hardie Grant			Not required	150	-	3	3
UBD Business Directory 1970 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1970 (Road & Area Matches)	Hardie Grant			Not required	150	-	6	6
UBD Business Directory 1961 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1961 (Road & Area Matches)	Hardie Grant			Not required	150	-	0	0
UBD Business Directory 1950 (Premise & Intersection Matches)	Hardie Grant			Not required	150	0	0	0
UBD Business Directory 1950 (Road & Area Matches)	Hardie Grant			Not required	150	-	1	1
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Premise & Intersection Matches)	Hardie Grant			Not required	500	0	0	0
UBD Business Directory Drycleaners & Motor Garages/Service Stations (Road & Area Matches)	Hardie Grant			Not required	500	-	0	0
Points of Interest	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	Quarterly	1000	0	1	8
Tanks (Areas)	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	Quarterly	1000	0	0	1
Tanks (Points)	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	Quarterly	1000	0	0	3
Major Easements	Dept. Finance, Services & Innovation	09/04/2018	09/04/2018	As required	1000	0	0	13
State Forest	Dept. Finance, Services & Innovation	18/01/2018	18/01/2018	As required	1000	0	0	0
NSW National Parks and Wildlife Service Reserves	NSW Office of Environment & Heritage	18/01/2018	30/09/2017	Annually	1000	0	0	0
Hydrogeology Map of Australia	Commonwealth of Australia (Geoscience Australia)	08/10/2014	17/03/2000	As required	1000	1	1	1



Dataset Name	Custodian	Supply Date	Currency Date	Update Frequency	Dataset Buffer (m)	No. Features Onsite	No. Features within 100m	No. Features within Buffer
Botany Groundwater Management Zones	NSW Department of Primary Industries	15/03/2018	01/10/2005	As required	1000	0	0	0
Groundwater Boreholes	NSW Dept. of Primary Industries - Water NSW; Commonwealth of Australia (Bureau of Meteorology)	21/03/2016	01/12/2015	Annually	2000	0	0	95
Geological Units 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	2	-	3
Geological Structures 1:100,000	NSW Dept. of Industry, Resources & Energy	20/08/2014		None planned	1000	0	-	0
Naturally Occurring Asbestos Potential	NSW Dept. of Industry, Resources & Energy	04/12/2015	24/09/2015	Unknown	1000	0	0	0
Soil Landscapes	NSW Office of Environment & Heritage	12/08/2014		None planned	1000	1	-	4
Atlas of Australian Soils	CSIRO	19/05/2017	17/02/2011	As required	1000	1	1	2
Standard Local Environmental Plan Acid Sulfate Soils	NSW Planning and Environment	07/10/2016	07/10/2016	As required	500	0	-	-
Atlas of Australian Acid Sulfate Soils	CSIRO	19/01/2017	21/02/2013	As required	1000	1	1	3
Dryland Salinity - National Assessment	National Land and Water Resources Audit	18/07/2014	12/05/2013	None planned	1000	0	0	0
Dryland Salinity Potential of Western Sydney	NSW Office of Environment & Heritage	12/05/2017	01/01/2002	None planned	1000	-	-	-
Mining Subsidence Districts	Dept. Finance, Services & Innovation	13/07/2017	01/07/2017	As required	1000	0	0	0
SEPP 14 - Coastal Wetlands	NSW Planning and Environment	17/12/2015	24/10/2008	Annually	1000	0	0	0
SEPP 26 - Littoral Rainforest	NSW Planning and Environment	17/12/2015	05/02/1988	Annually	1000	0	0	0
SEPP 71 - Coastal Protection	NSW Planning and Environment	17/12/2015	01/08/2003	Annually	1000	0	0	1
SEPP Major Developments 2005	NSW Planning and Environment	09/03/2013	25/05/2005	Under Review	1000	1	1	1
SEPP Strategic Land Use Areas	NSW Planning and Environment	01/08/2017	28/01/2014	Annually	1000	0	0	0
LEP - Land Zoning	NSW Planning and Environment	11/04/2018	16/03/2018	Quarterly	1000	0	0	9
LEP - Minimum Subdivision Lot Size	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Height of Building	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Floor Space Ratio	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Land Application	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	0	0	-	-
LEP - Land Reservation Acquisition	NSW Planning and Environment	04/04/2018	09/03/2018	Quarterly	0	0	-	-
State Heritage Items	NSW Office of Environment & Heritage	04/04/2018	30/09/2016	Quarterly	1000	0	0	0
Local Heritage Items	NSW Planning and Environment	04/04/2018	23/03/2018	Quarterly	1000	0	0	0
Bush Fire Prone Land	NSW Rural Fire Service	10/05/2018	23/01/2018	Quarterly	1000	0	0	1
Native Vegetation of the Illawarra Escarpment & Coastal Plain	NSW Office of Environment & Heritage	20/05/2015	04/08/2011	Unknown	1000	2	4	13
RAMSAR Wetlands	Commonwealth of Australia Department of the Environment	08/10/2014	24/06/2011	As required	1000	0	0	0
Groundwater Dependent Ecosystems	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	3
Inflow Dependent Ecosystems Likelihood	Bureau of Meteorology	14/08/2017	15/05/2017	Unknown	1000	0	0	7
NSW BioNet Species Sightings	NSW Office of Environment & Heritage	19/07/2018	19/07/2018	Daily	10000	-	-	-

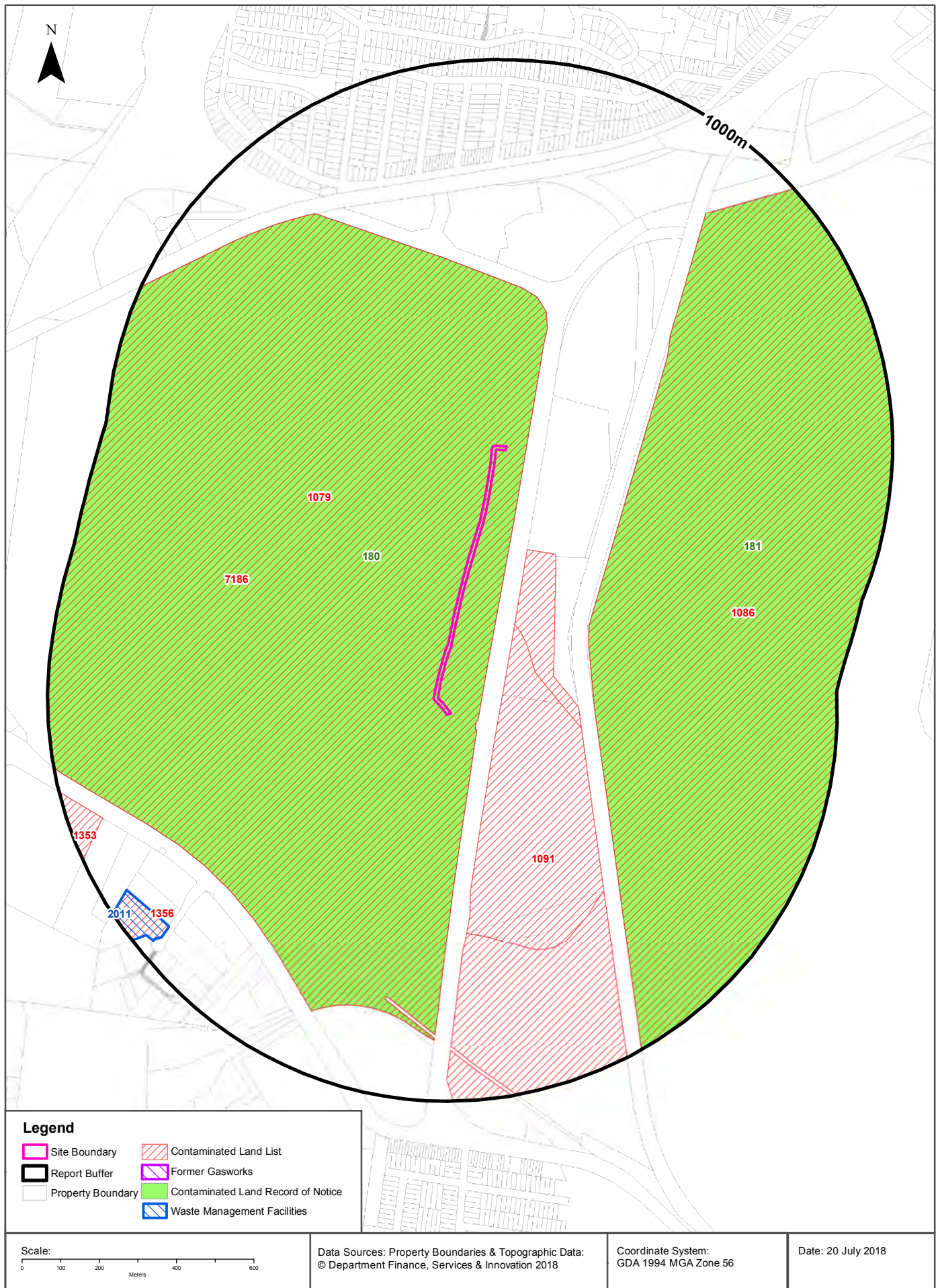
# Aerial Imagery 2017

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



# Contaminated Land & Waste Management Facilities

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



# Contaminated Land & Waste Management Facilities

## Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

### List of NSW contaminated sites notified to EPA

Records from the NSW EPA Contaminated Land list within the dataset buffer:

Map Id	Site	Address	Suburb	Activity	Management Class	Status	Location Confidence	Dist (m)	Direction
1079	BHP Area 21	Springhill Road	Port Kembla	Metal Industry	Contamination formerly regulated under the CLM Act	Current EPA List	Premise Match	0m	Onsite
7186	Port Kembla Steelworks Recycling Area	Springhill Road	Port Kembla	Unclassified	Regulation under CLM Act not required	Current EPA List	Premise Match	0m	Onsite
1091	Port Kembla Springhill Works	Springhill Road	Port Kembla	Metal Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	122m	South
1086	No 2 Steelworks	Five Islands Road	Port Kembla	Metal Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	129m	South East
1356	Veolia Environmental Services	9 Waynote Place	Unanderra	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	903m	South West
1353	Endeavour Energy Springhill Field Service Centre	195 Five Island Road	Unanderra	Other Industry	Regulation under CLM Act not required	Current EPA List	Premise Match	910m	South West

The values within the EPA site management class in the table above, are given more detailed explanations in the table below:

EPA site management class	Explanation
Contamination being managed via the planning process (EP&A Act)	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. The contamination of this site is managed by the consent authority under the Environmental Planning and Assessment Act 1979 (EP&A Act) planning approval process, with EPA involvement as necessary to ensure significant contamination is adequately addressed. The consent authority is typically a local council or the Department of Planning and Environment.
Contamination currently regulated under CLM Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). Management of the contamination is regulated by the EPA under the CLM Act. Regulatory notices are available on the EPA's Contaminated Land Public Record of Notices.
Contamination currently regulated under POEO Act	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation. Management of the contamination is regulated under the Protection of the Environment Operations Act 1997 (POEO Act). The EPA's regulatory actions under the POEO Act are available on the POEO public register.
Contamination formerly regulated under the CLM Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation under the Contaminated Land Management Act 1997 (CLM Act). The contamination was addressed under the CLM Act.
Contamination formerly regulated under the POEO Act	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed under the Protection of the Environment Operations Act 1997 (POEO Act).
Contamination was addressed via the planning process (EP&A Act)	The EPA has determined that the contamination is no longer significant enough to warrant regulation. The contamination was addressed by the appropriate consent authority via the planning process under the Environmental Planning and Assessment Act 1979 (EP&A Act).
Ongoing maintenance required to manage residual contamination (CLM Act)	The EPA has determined that ongoing maintenance, under the Contaminated Land Management Act 1997 (CLM Act), is required to manage the residual contamination. Regulatory notices under the CLM Act are available on the EPA's Contaminated Land Public Record of Notices.

EPA site management class	Explanation
Regulation being finalised	The EPA has completed an assessment of the contamination and decided that the contamination is significant enough to warrant regulation under the Contaminated Land Management Act 1997. A regulatory approach is being finalised.
Regulation under the CLM Act not required	The EPA has completed an assessment of the contamination and decided that regulation under the Contaminated Land Management Act 1997 is not required.
Under assessment	The contamination is being assessed by the EPA to determine whether regulation is required. The EPA may require further information to complete the assessment. For example, the completion of management actions regulated under the planning process or Protection of the Environment Operations Act 1997. Alternatively, the EPA may require information via a notice issued under s77 of the Contaminated Land Management Act 1997 or issue a Preliminary Investigation Order.

NSW EPA Contaminated Land List Data Source: Environment Protection Authority  
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## Contaminated Land & Waste Management Facilities

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

### Contaminated Land: Records of Notice

Record of Notices within the dataset buffer:

Map Id	Name	Address	Suburb	Notices	Area No	Location Confidence	Distance	Direction
180	BHP Area 21	Springhill Road	Port Kembla	1 former	3121	Premise Match	0m	Onsite
181	No 2 Steelworks	Five Islands Road	Port Kembla	4 former	3337	Premise Match	333m	South East

Contaminated Land Records of Notice Data Source: Environment Protection Authority

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Terms of use and disclaimer for Contaminated Land: Record of Notices, please visit

<http://www.epa.nsw.gov.au/clm/clmdisclaimer.htm>

### Former Gasworks

Former Gasworks within the dataset buffer:

Map Id	Location	Council	Further Info	Location Confidence	Distance	Direction
N/A	No records in buffer					

Former Gasworks Data Source: Environment Protection Authority

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### National Waste Management Site Database

Sites on the National Waste Management Site Database within the dataset buffer:

Site Id	Owner	Name	Address	Suburb	Class	Landfill	Reprocess	Transfer	Comments	Loc Conf	Dist (m)	Direction
2011	Transpacific Industries / Cleanaway	Transpacific Industries	10-12 Waynote Place	Unanderra	Multi-Purpose		Operational	Operational		Premise Match	903m	South West

Waste Management Facilities Data Source: Geoscience Australia

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# EPA PFAS Investigation Program

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

## EPA PFAS Investigation Program

Sites that are part of the EPA PFAS investigation program, within the dataset buffer:

Id	Site	Address	Location Confidence	Distance	Direction
N/A	No records in buffer				

EPA PFAS Investigation Program: Environment Protection Authority  
© State of New South Wales through the Environment Protection Authority

## EPA Other Sites with Contamination Issues

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

### EPA Other Sites with Contamination Issues

This dataset contains other sites identified on the EPA website as having contamination issues. This dataset currently includes:

- James Hardie asbestos manufacturing and waste disposal sites
- Radiological investigation sites in Hunter's Hill

Sites within the dataset buffer:

Site Id	Site Name	Site Address	Dataset	Comments	Location Confidence	Distance	Direction
N/A	No records in buffer						

EPA Other Sites with Contamination Issues: Environment Protection Authority

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# Current EPA Licensed Activities

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



## EPA Activities

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

## Licensed Activities under the POEO Act 1997

Licensed activities under the Protection of the Environment Operations Act 1997, within the dataset buffer:

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Agricultural fertiliser (inorganic) production	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Cement or lime handling	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Cement or lime production	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Coal works	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Coke production	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Crushing, grinding or separating	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Dangerous goods production	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	General chemicals storage	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Generation of electrical power from gas	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Iron or steel production (iron ore)	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Mineral processing	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Railway systems activities	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Recovery of general waste	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Recovery of waste tyres	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Scrap metal processing	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Shipping in bulk	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Waste storage - other types of waste	Premise Match	0m	Onsite
6092	BLUESCOPE STEEL (AIS) PTY. LTD.	PORT KEMBLA STEELWORKS	FIVE ISLANDS ROAD	PORT KEMBLA	Waste storage - waste tyres	Premise Match	0m	Onsite
571	BLUESCOPE STEEL LIMITED	BLUESCOPE AUSTRALIA AND NEW ZEALAND - SPRINGHILL WORKS	SPRINGHILL ROAD	PORT KEMBLA	Chemical storage waste generation	Premise Match	122m	South

EPL	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
571	BLUESCOPE STEEL LIMITED	BLUESCOPE AUSTRALIA AND NEW ZEALAND - SPRINGHILL WORKS	SPRINGHILL ROAD	PORT KEMBLA	Metal coating	Premise Match	122m	South
571	BLUESCOPE STEEL LIMITED	BLUESCOPE AUSTRALIA AND NEW ZEALAND - SPRINGHILL WORKS	SPRINGHILL ROAD	PORT KEMBLA	Metal processing	Premise Match	122m	South
571	BLUESCOPE STEEL LIMITED	BLUESCOPE AUSTRALIA AND NEW ZEALAND - SPRINGHILL WORKS	SPRINGHILL ROAD	PORT KEMBLA	Non-thermal treatment of hazardous and other waste	Premise Match	122m	South
571	BLUESCOPE STEEL LIMITED	BLUESCOPE AUSTRALIA AND NEW ZEALAND - SPRINGHILL WORKS	SPRINGHILL ROAD	PORT KEMBLA	Recovery of waste oil	Premise Match	122m	South
571	BLUESCOPE STEEL LIMITED	BLUESCOPE AUSTRALIA AND NEW ZEALAND - SPRINGHILL WORKS	SPRINGHILL ROAD	PORT KEMBLA	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Premise Match	122m	South
3142	AUSTRALIAN RAIL TRACK CORPORATION LIMITED		GPO BOX 14, SYDNEY, NSW 2001		Railway systems activities	Network of Features	290m	South East
13421	JOHN HOLLAND RAIL PTY LTD		PO Box 215 , PARRAMATTA, NSW 2124		Railway systems activities	Road Match	290m	South East
20870	BENEDICT RECYCLING PTY LIMITED		171-173 Five Islands Road, UNANDERRA, NSW 2526		Recovery of general waste	Premise Match	784m	South West
20870	BENEDICT RECYCLING PTY LIMITED		171-173 Five Islands Road, UNANDERRA, NSW 2526		Waste storage - other types of waste	Premise Match	784m	South West
10095	BOC LIMITED		147 FIVE ISLANDS ROAD	CRINGILA	Dangerous goods production	Premise Match	888m	South
10095	BOC LIMITED		147 FIVE ISLANDS ROAD	CRINGILA	General chemicals storage	Premise Match	888m	South
10251	CLEANAWAY OPERATIONS PTY LTD	TRANSPACIFIC INDUSTRIES	10-12 WAYNOTE PLACE	UNANDERRA	Contaminated soil treatment	Premise Match	903m	South West
10251	CLEANAWAY OPERATIONS PTY LTD	TRANSPACIFIC INDUSTRIES	10-12 WAYNOTE PLACE	UNANDERRA	Non-thermal treatment of hazardous and other waste	Premise Match	903m	South West
10251	CLEANAWAY OPERATIONS PTY LTD	TRANSPACIFIC INDUSTRIES	10-12 WAYNOTE PLACE	UNANDERRA	Recovery of general waste	Premise Match	903m	South West
10251	CLEANAWAY OPERATIONS PTY LTD	TRANSPACIFIC INDUSTRIES	10-12 WAYNOTE PLACE	UNANDERRA	Waste storage - hazardous, restricted solid, liquid, clinical and related waste and asbestos waste	Premise Match	903m	South West

POEO Licence Data Source: Environment Protection Authority  
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# Delicensed & Former Licensed EPA Activities

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



## EPA Activities

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

## Delicensed Activities still regulated by the EPA

Delicensed activities still regulated by the EPA, within the dataset buffer:

Licence No	Organisation	Name	Address	Suburb	Activity	Loc Conf	Distance	Direction
1110	BITUPAVE LTD	BORAL ASPHALT	SPRINGHILL ROAD	PORT KEMBLA	Bitumen mixing	Premise Match	0m	Onsite
3754	BORAL RESOURCES (COUNTRY) PTY. LIMITED	BORAL COUNTRY - CONCRETE & QUARRIES	PRT LOTS 1 & 19 FIVE ISLANDS ROAD	PORT KEMBLA	Concrete works	Premise Match	802m	South West
11292	ENDEAVOUR ENERGY	INTEGRAL ENERGY SPRINGHILL TRANSMISSION SUBSTATION	GLASTONBURY AVENUE	UNANDERRA	Hazardous, Industrial or Group A Waste Generation or Storage	Premise Match	910m	South West
1355	CLEARY BROS (BOMBO) PTY LTD	CLEARY BROS CONCRETE	8 JOHN CLEARY PLACE	CONISTON	Concrete works	Premise Match	944m	North East

Delicensed Activities Data Source: Environment Protection Authority  
 © State of New South Wales through the Environment Protection Authority

## Former Licensed Activities under the POEO Act 1997, now revoked or surrendered

Former Licensed activities under the Protection of the Environment Operations Act 1997, now revoked or surrendered, within the dataset buffer:

Licence No	Organisation	Location	Status	Issued Date	Activity	Loc Conf	Distance	Direction
4653	LUHRMANN ENVIRONMENT MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	316m	-
4838	Robert Orchard	Various Waterways throughout New South Wales - SYDNEY NSW 2000	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	316m	-
6630	SYDNEY WEED & PEST MANAGEMENT PTY LTD	WATERWAYS THROUGHOUT NSW - PROSPECT, NSW, 2148	Surrendered		Other Activities / Non Scheduled Activity - Application of Herbicides	Network of Features	316m	-
11003	VEOLIA ENVIRONMENTAL SERVICES (AUSTRALIA) PTY LTD	10-16 WAYNOTE PLACE, UNANDERRA, NSW 2526	Surrendered	03/10/2000	Non-thermal treatment of hazardous and other waste	Premise Match	903m	South West

Former Licensed Activities Data Source: Environment Protection Authority  
 © State of New South Wales through the Environment Protection Authority

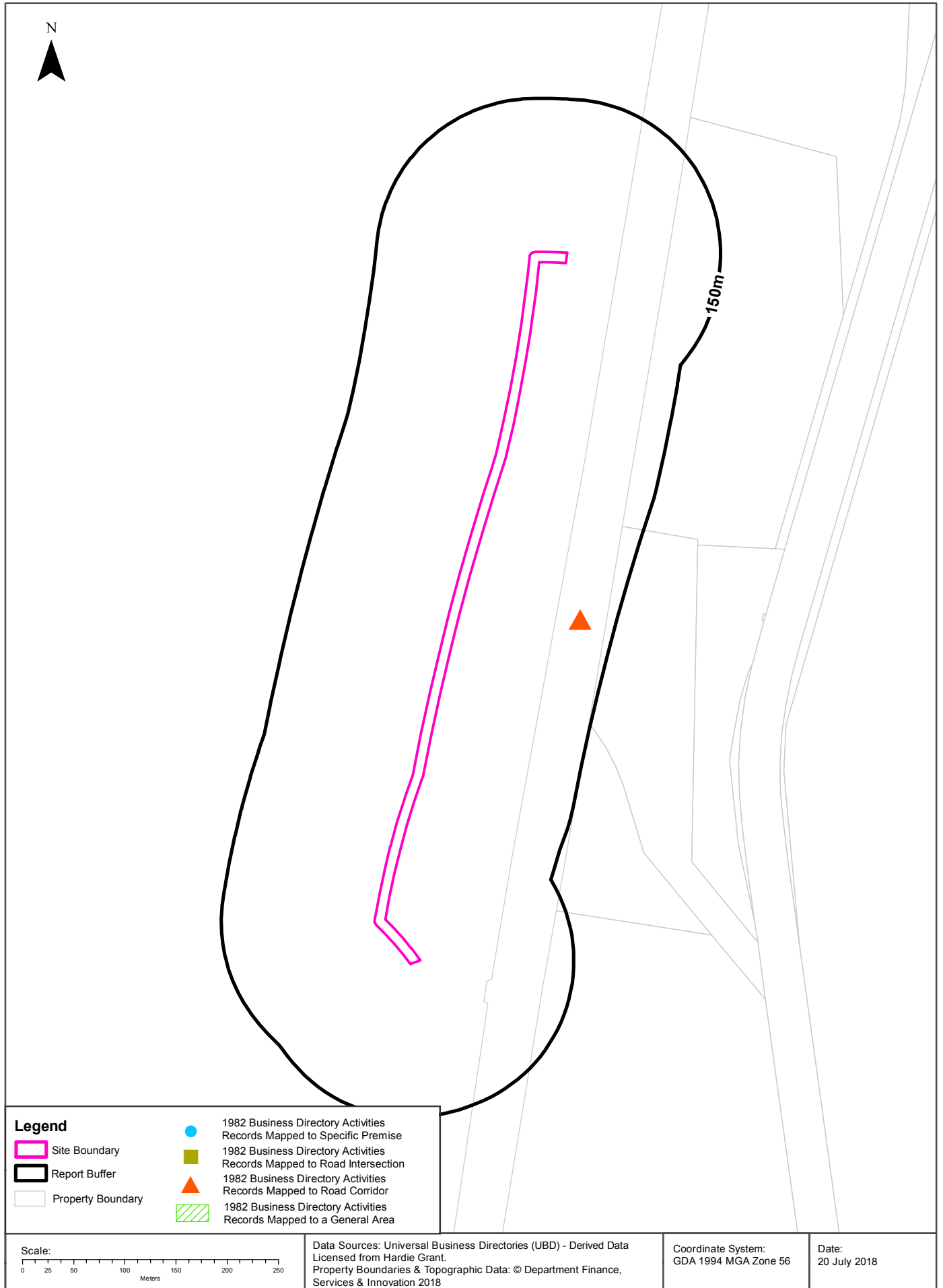
# UPSS Sensitive Zones

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



# 1982 Historical Business Directory Records

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



## Historical Business Directories

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

#### 1982 Business Directory Records Premise or Road Intersection Matches

Records from the 1982 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

#### 1982 Business Directory Records Road or Area Matches

Records from the 1982 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

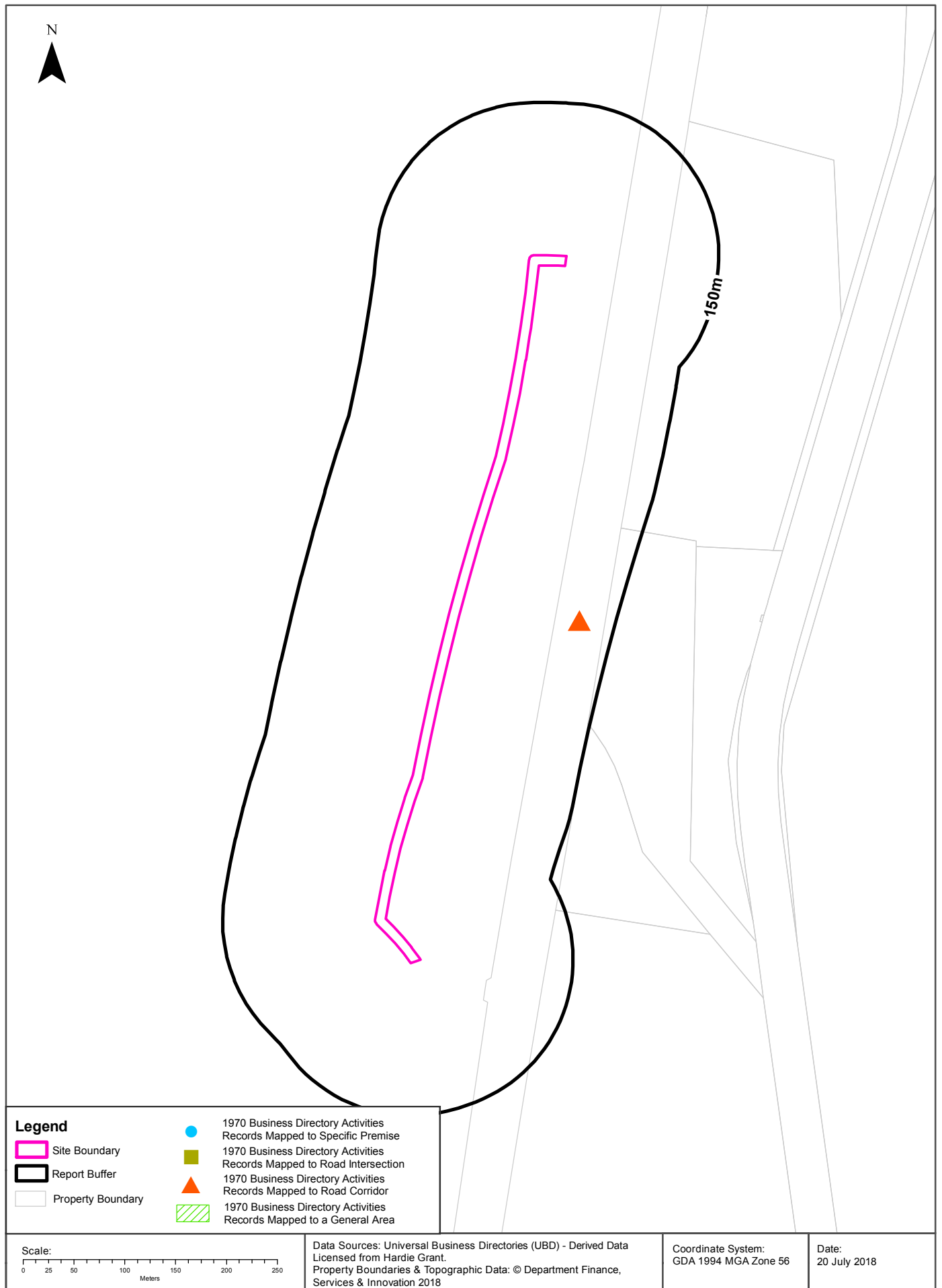
Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
BUILDINGS - PRE-FABRICATED MFRS. &/OR DISTS	Lysaght, John Limited, Springhill Rd., Port Kembla., Wollongong	139433	Road Match	50m
STEEL FABRICATORS.	Lysaght, John Limited, Springhill Rd., Port Kembla., Wollongong	145118	Road Match	50m
CARRIERS &/OR CARTAGE CONTRACTORS	Tex Liquid Transport Pty. Ltd., Springhill Rd., Coniston., Wollongong	139761	Road Match	50m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant



# 1970 Historical Business Directory Records

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



## Historical Business Directories

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

#### 1970 Business Directory Records Premise or Road Intersection Matches

Records from the 1970 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

#### 1970 Business Directory Records Road or Area Matches

Records from the 1970 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
BUILDINGS-PREFABRICATED-MANUFACTURERS & DISTRIBUTORS	Lysaght, J. (Aust.) Ltd., Springhill Rd., Port Kembla Wollongong	560810	Road Match	50m
LAMINATED MATERIALS & PRODUCTS MFRS.	Lysaght, John (Aust.) Ltd., Springhill Rd., Port Kembla Wollongong	564307	Road Match	50m
ROOFING MATERIAL MFRS.&/OR DIST.	Lysaght, John (Aust.) Ltd., Springhill Rd., Port Kembla Wollongong	566944	Road Match	50m
SILO MANUFACTURERS	Lysaght, John (Aust.) Ltd., Springhill Rd., Port Kembla Wollongong	567270	Road Match	50m
STEEL FLOORING-INDUSTRIAL-SUPPLIERS	Lysaght, John (Aust.) Ltd., Springhill Rd., Port Kembla Wollongong	567511	Road Match	50m
TANK & TANK STAND MFRS. &/OR DISTRIBUTORS	Lysaght, John (Aust.) Ltd., Springhill Rd., Port Kembla Wollongong	567626	Road Match	50m

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## Historical Business Directories

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

#### 1961 Business Directory Records Premise or Road Intersection Matches

Records from the 1961 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

#### 1961 Business Directory Records Road or Area Matches

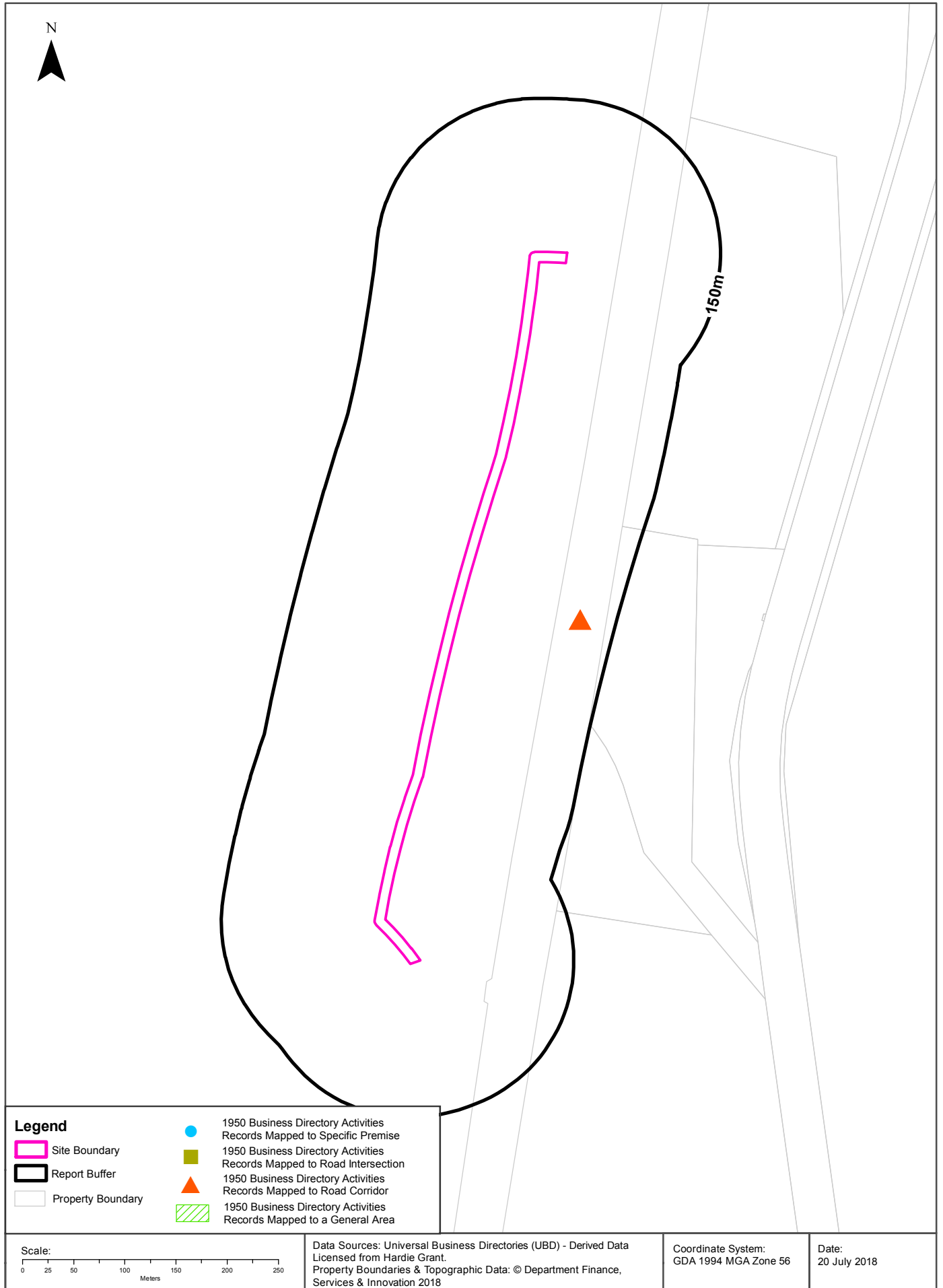
Records from the 1961 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer			

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

# 1950 Historical Business Directory Records

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



## Historical Business Directories

### Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

#### 1950 Business Directory Records Premise or Road Intersection Matches

Records from the 1950 UBD Business Directory, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer				

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#### 1950 Business Directory Records Road or Area Matches

Records from the 1950 UBD Business Directory, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Location Confidence	Distance to Road Corridor or Area
PAINTER PAPERHANGER DECORATOR	Tomlin,L., Spring Hill Rd., Cohiston Wollongong	190382	Road Match	50m

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

## Historical Business Directories

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

### Dry Cleaners, Motor Garages & Service Stations Premise or Road Intersection Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a premise or road intersection, within the dataset buffer:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Feature Point	Direction
N/A	No records in buffer					

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

## Historical Business Directories

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

### Dry Cleaners, Motor Garages & Service Stations Road or Area Matches

Dry Cleaners, Motor Garages & Service Stations from UBD Business Directories, mapped to a road or an area, within the dataset buffer. Records are mapped to the road when a building number is not supplied, cannot be found, or the road has been renumbered since the directory was published:

Business Activity	Premise	Ref No.	Year	Location Confidence	Distance to Road Corridor or Area
N/A	No records in buffer				

Business Directory Content Derived from Universal Business Directories (UBD) - Licensed from Hardie Grant

# Aerial Imagery 2016

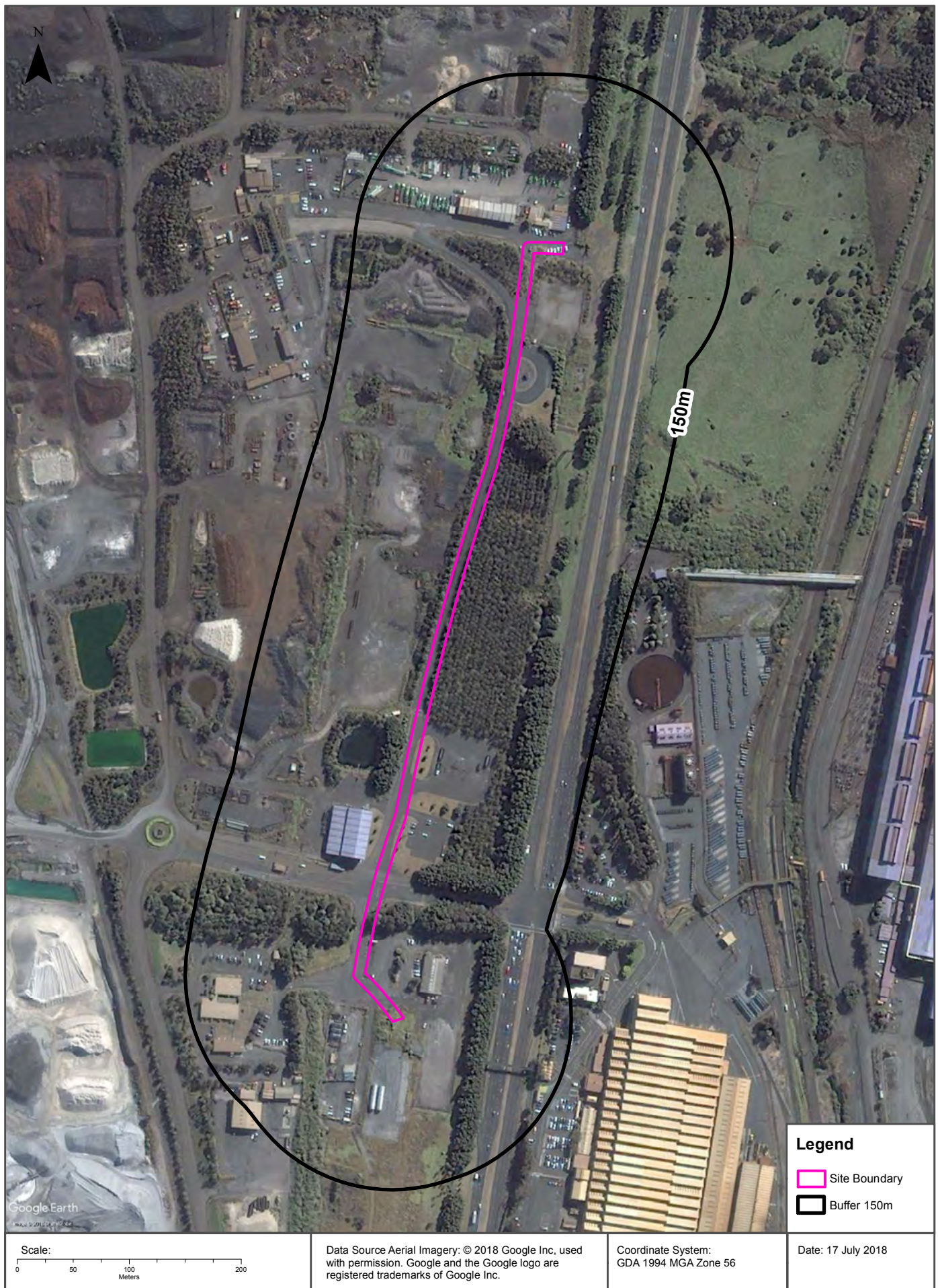
Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)





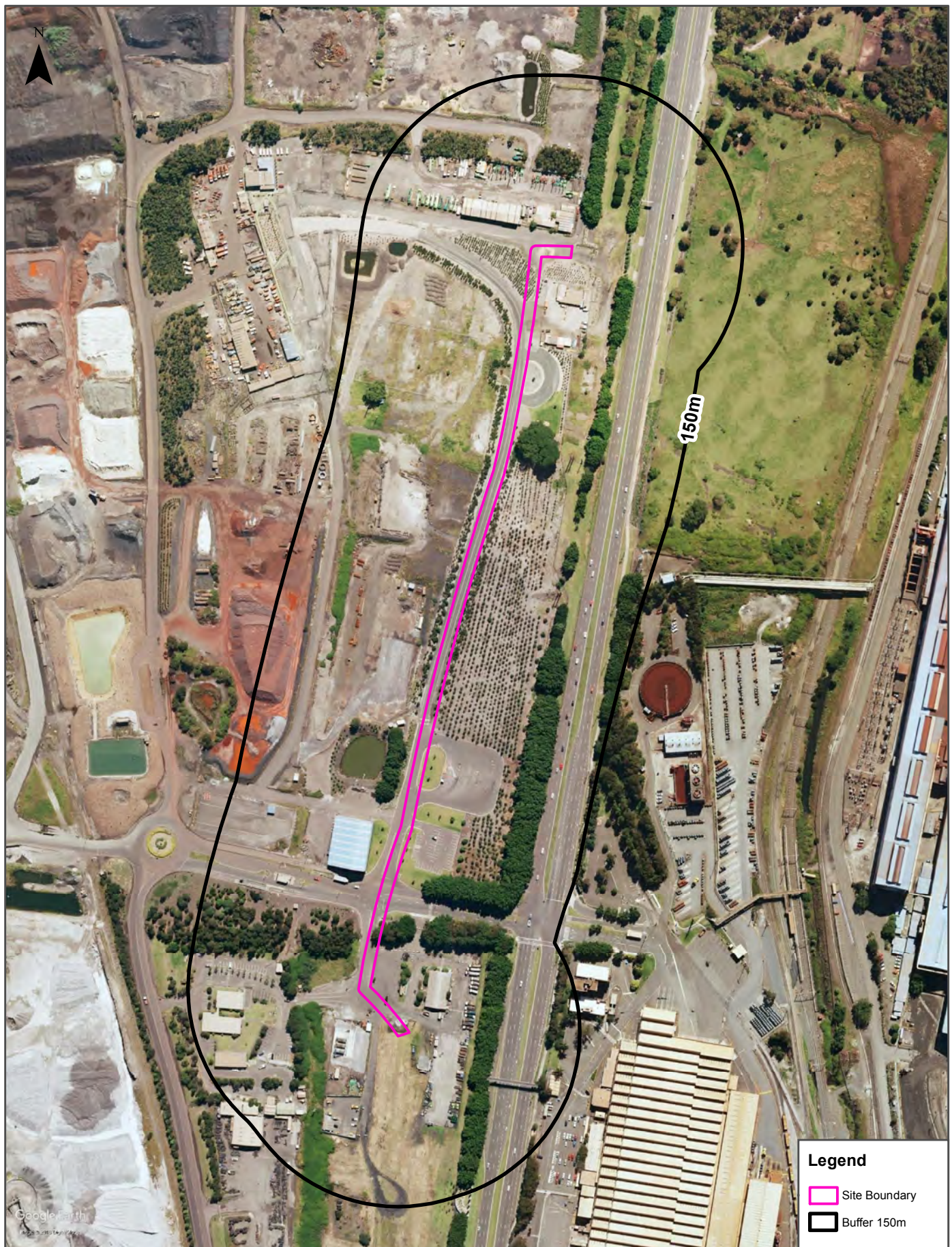
# Aerial Imagery 2013

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)





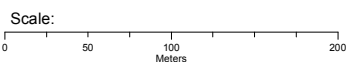
# Aerial Imagery 2008

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



**Legend**

-  Site Boundary
-  Buffer 150m



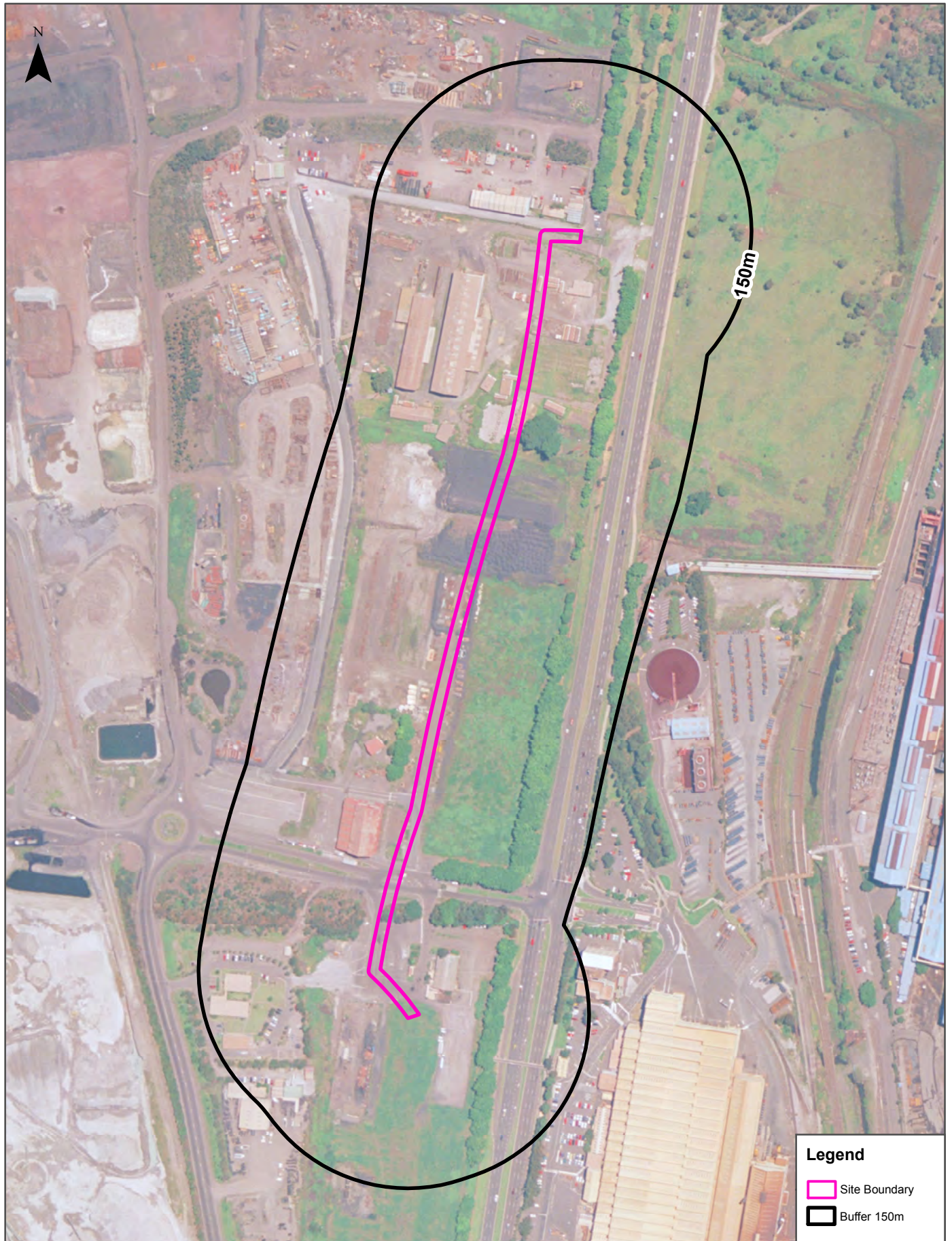
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Coordinate System:  
GDA 1994 MGA Zone 56

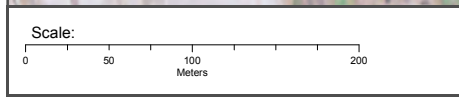
Date: 17 July 2018

# Aerial Imagery 2002

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



Legend	
	Site Boundary
	Buffer 150m



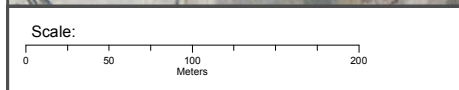
Data Source Aerial Imagery:  
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Coordinate System:  
GDA 1994 MGA Zone 56

Date: 20 July 2018

# Aerial Imagery 1994

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



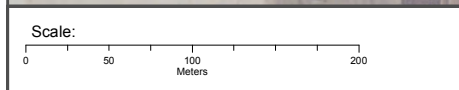
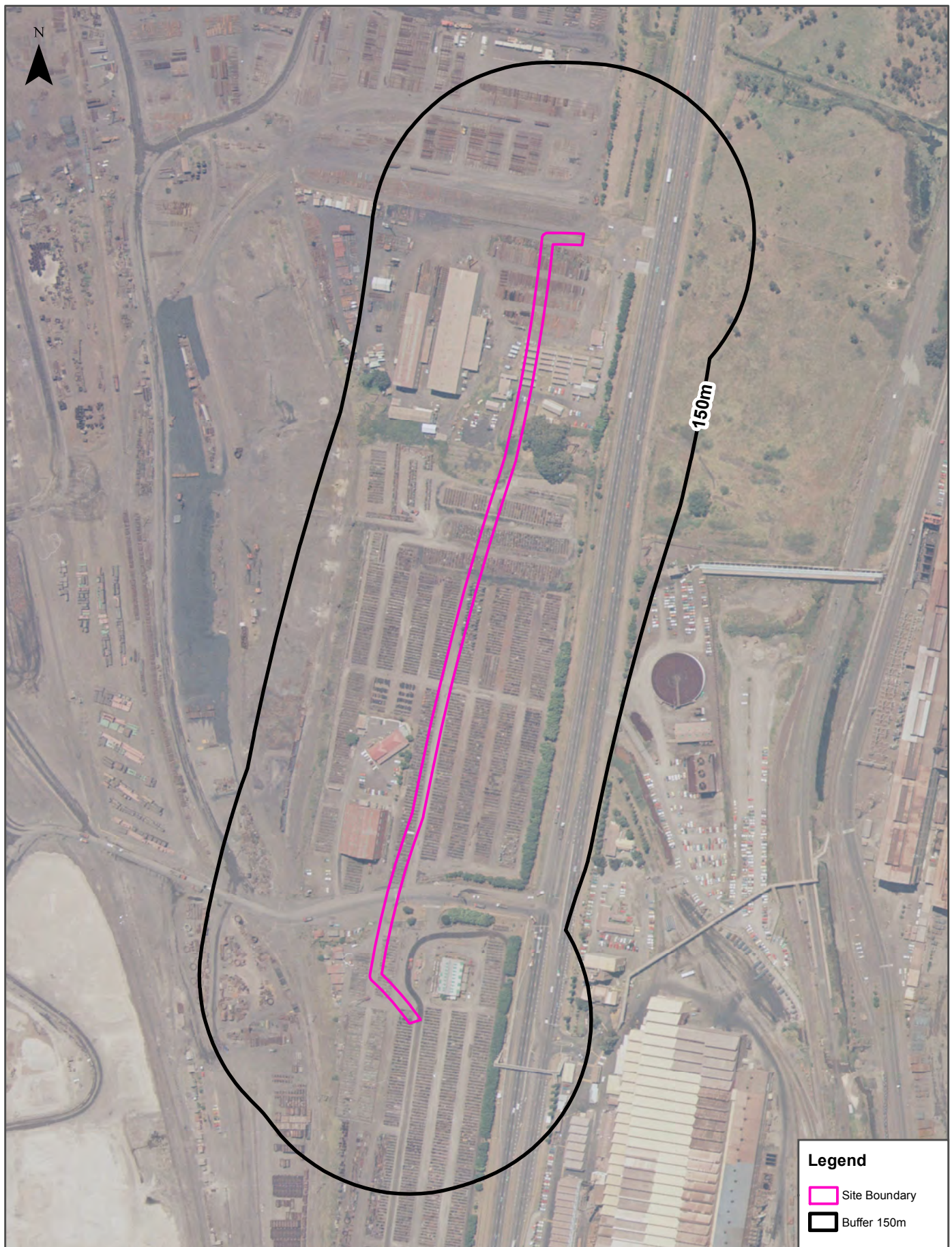
Data Source Aerial Imagery:  
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Coordinate System:  
GDA 1994 MGA Zone 56

Date: 17 July 2018

# Aerial Imagery 1984

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



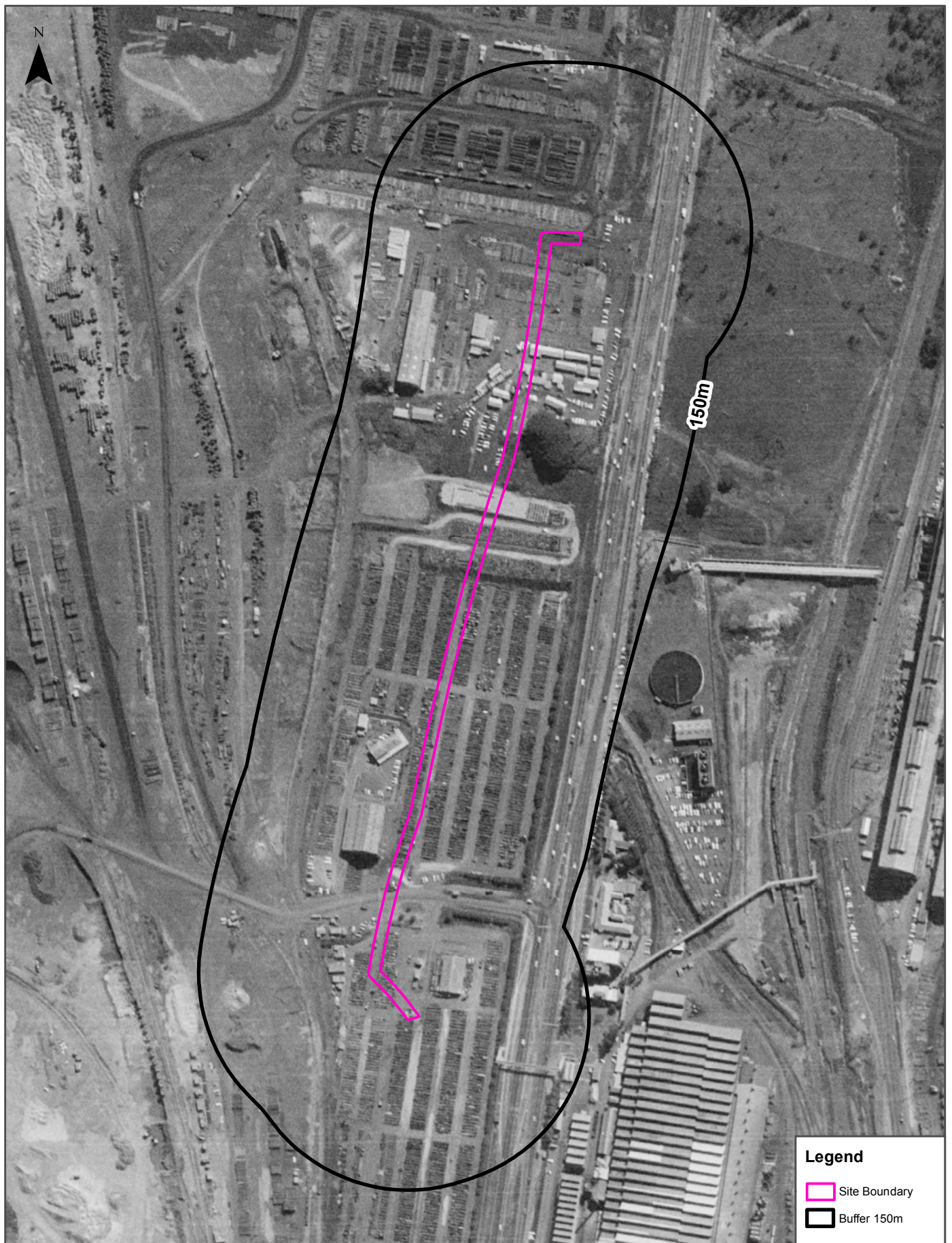
Data Source Aerial Imagery:  
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Coordinate System:  
GDA 1994 MGA Zone 56



Date: 17 July 2018

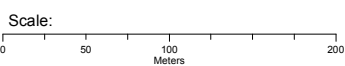
# Aerial Imagery 1975

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



### Legend

-  Site Boundary
-  Buffer 150m



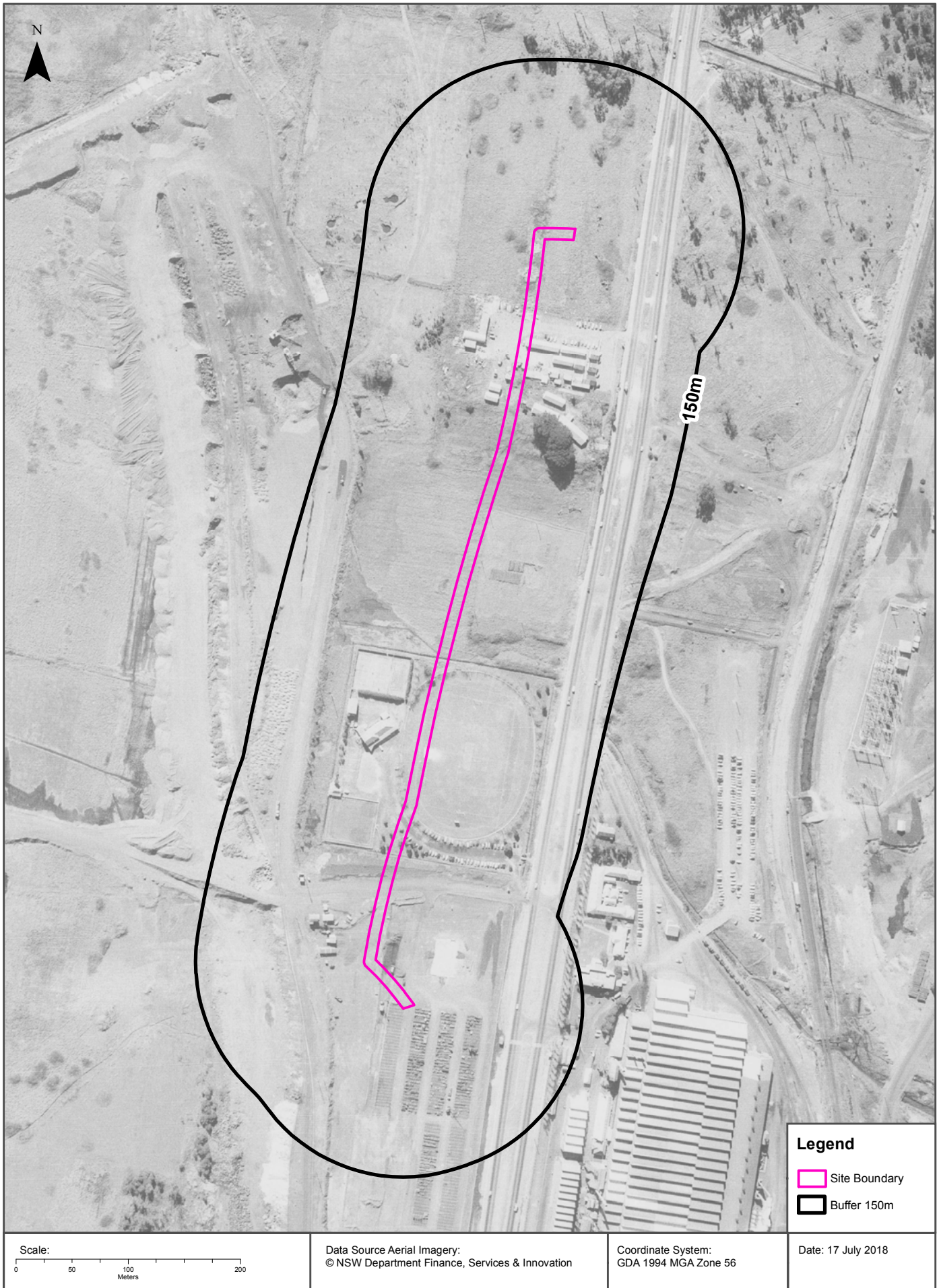
Data Source Aerial Imagery:  
© NSW Department Finance, Services & Innovation

Coordinate System:  
GDA 1994 MGA Zone 56

Date: 17 July 2018

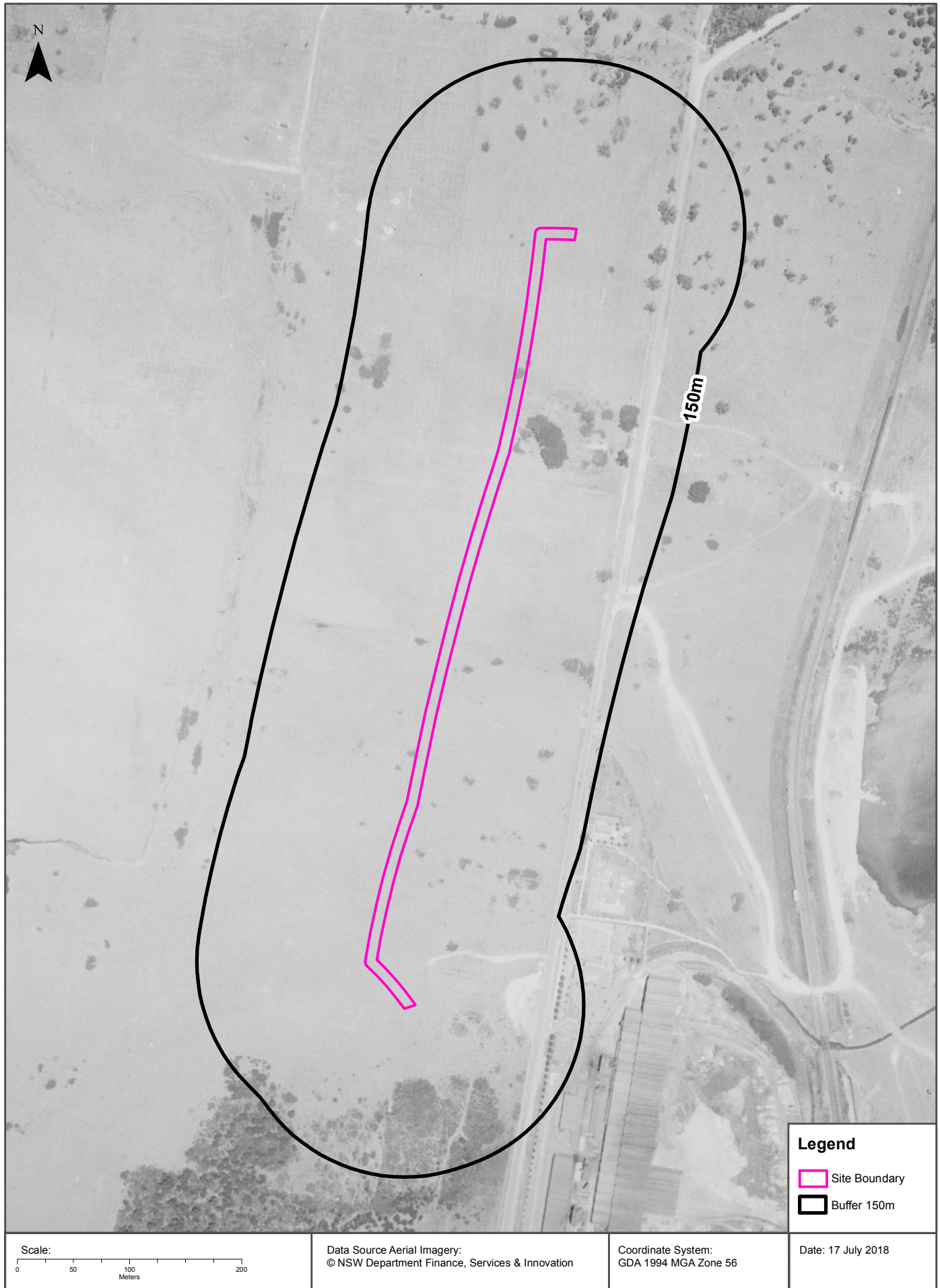
# Aerial Imagery 1961

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)



# Aerial Imagery 1951

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)





# Topographic Map 2015

Proposed Gas Pipeline & Berth 101, Port Kembla, NSW 2505 (Section 2)

