



Site Details Report

Date: 08/05/2025

Site reference 70100007 - Wilson Nature Reserve - WNR3A - WNR3A

Alternative Site References

Numbering System	Reference Code	Site Name	Short Name
AWRC	70100007	Wilson Nature Reserve - WNR3A	WNR3A
TEXT	WNR3A	Wilson Nature Reserve - WNR3A	WNR3A
TEXT_REF	WNR3A	WILSON NATURE RESERVE SITE 2 DEEP BORE - WNR3A	WNR3A
WIN_ID	23043437		WNR3A

General Details

Site Type	Groundwater	Sub Type	Bore or Well	Site Geofeature	Ground
Northing	6729028.5	Easting	348682.08	Zone	50
Latitude	-29.559299777	Longitude	115.438043837	Spheroid	GDA2020
Thou250 Map Index	SH5005	Geographic Precision (+/- m)	Unknown		
Local Govt Authority	SHIRE OF THREE SPRINGS	Locality	ARROWSMITH EAST	DWER Region	Mid West-Gascoyne
Catchment	Arrowsmith River	Estuary		BOM Rainfall District	8 - North Coast
River Basin	701 - Greenough River	Groundwater Area	Arrowsmith	Groundwater Province	Perth
Surface Water Area	Arrowsmith River	Surface Water SubArea	Arrowsmith River	GgStn Catchment Area(km2)	N/A
Site Comment					

Depth Measurement Points *(Site reference: 70100007)*

Measurement Point Type	Elevation (m as per Datum Plane)	Datum	Measurement Method	Date	Comments
Ground level	213.790	AHD	Surveyed	03/12/2010	
Top of inner casing	214.378	AHD	Surveyed	21/12/2010	Surveyed February 2011



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Drilling (Site reference: 70100007)

From (mbGL)	To (mbGL)	Diameter (mm)	Fluid Name
0.000	13.800	203	Unknown
13.801	40.500	152	Unknown

Borehole Information (Site reference: 70100007)

Completed Date	4/12/2010	Drill Method Name	Sonic		
Owner Name	Department of Water	Drill Rig Name	Unknown		
Drill Company Name	Boart Longyear	Total Construction Depth (mbGL)	29.8	Depth Drilled (mbGL)	29.8
Comments	Elements: WNR3A only. Value of 0.001 added to Depth From to satisfy system Primary key constraints. JA 16/06/2016 (13.801-40.5); Both wnr3a and wnr3c constructed in this hole (0-13.8) Log event: Continuous core				

Casing (Site reference: 70100007)

From (mbGL)	To (mbGL)	Element	Material	Inlet Type	Inside Dia. (mm)	Outside Dia. (mm)	Aperture (mm)	Comments
-0.673	0.000	Standpipe	Steel galvanised	Not applicable	203.000			
-0.588	27.500	Casing	PVC - Class 12	Not applicable	50.000			
27.500	29.500	Inlet (screen)	PVC - Class 12	Slotted	50.000		1.000	
29.500	29.800	End cap	PVC	Not applicable	50.000			

Fill (Site reference: 70100007)

From (mbGL)	To (mbGL)	Fill Type	Material Type	Fill Volume (m3)	Grain Size (mm)
0.000	5.500	Seal	Cement	0.06	
5.500	6.500	Seal	Bentonite	0.01	
6.500	14.500	Annular Fill	Gravel	0.07	
14.500	15.500	Seal	Bentonite	0.01	
15.500	25.500	Seal	Cement	0.11	



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From (mbGL)	To (mbGL)	Fill Type	Material Type	Fill Volume (m3)	Grain Size (mm)
25.500	26.500	Seal	Bentonite	0.01	
26.500	30.500	Annular Fill	Gravel	0.05	
30.500	31.500	Void Fill	Bentonite	0.01	
31.500	40.500	Void Fill	Sand	0.10	

Aquifers (Site reference: 70100007)

Aquifer Name	Depth From/To (mbGL)	Comments
Perth-Leederville-Parmelia	-	

Lithology Log (Site reference: 70100007)

From (mbGL)	To (mbGL)	Interpreted By	Substance	Lithological Description
0.000	0.050	Geologist--Internal staff	Sand	Sand : munsell colour 10yr 6/3 pale brown; unconsolidated; very soft; dry. Organic matters and qtz sand. Poorly sorted; very fine to very coarse grained. Sub angular. Common heavy minerals ; possible mica.
0.050	0.200	Geologist--Internal staff	Sand	Sand : munsell colour 10yr 7/3 very pale brown; very soft; dry. Transition zone decreasing with depth qtz (90%); heavy minerals (5%); mica? (2.5%)
0.200	0.450	Geologist--Internal staff	Sand	Sand : munsell colour 10yr 8/6 yellow; very soft; dry. Sand as for above; with small 1cm nodules of consolidated sandstone (munsell colour 10r 4/6 red inside nodules). Fe staining inside nodules
0.450	0.900	Geologist--Internal staff	Sand	Sand : munsell colour 10yr 8/8 yellow; very soft; dry. Yellow sand with approximately 15% sandstone nodules. Sand is predominately medium grained qtz sand with heavy minerals. Nodules are poorly sorted; angular to sub-rounded; very fine grained to very coarse grained.
0.900	3.250	Geologist--Internal staff	Sand	Sand : munsell colour 7.5yr 7/6 reddish yellow and munsell colour 2.5yr 5/8 red. Very soft; dry. Poorly sorted unconsolidated sand; fine to coarse grained; silty increasing red colour with depth. Possible laminations within sample. Up to 30% of the sample consolidated sandstone nodules.
3.250	4.500	Geologist--Internal staff	Sand	Sand : munsell colour 7.5yr 7/6 reddish yellow; very soft; dry. Predominately very coarse grained angular qtz sand with some fine and medium grains (<20%). Fine grained heavy minerals common (5%). Iron staining common on qtz grains. Friable sandstone nodules up to 1cm in diameter present in sample (munsell colour 10yr 8/1 white).
4.500	5.400	Geologist--Internal staff	Sand	Sand : munsell colour 5yr 7/4 pink to munsell colour 7.5yr 7/6 reddish yellow. Very soft; dry. Sand as above but decrease in iron staining. Fine to very coarse grained. Possible feldspars and kaolinised grains. Some large consolidated sandstone pieces (whole diameter of core up to 2cm thick); possibly only broken through drilling process. Sandstone is very poorly sorted; fine to very coarse grained; clast supported; angular to sub rounded (mostly sub angular); predominantly qtz with minor iron staining. Up to 2% fine grained heavy minerals.



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From (mbGL)	To (mbGL)	Interpreted By	Substance	Lithological Description
5.400	6.150	Geologist--Internal staff	Sand	Sand : munsell colour 5yr 7/4 pink. Sand component broken rock; predominantley siliceous material; rare qtz with up to 40% iron stained grains. Up to 15% sandstone clasts which become matrix supported and harder with siliceous cement. Medium grained; sub rounded to sub angular. Predominantly qtz and heavy minerals.
6.150	6.300	Geologist--Internal staff	Sandstone	Sandstone : munsell colour 5yr 7/4 pink. Broken sandstone; clast supported; friable; decrease in iron staining. Wet at 6.5m due to drillers adding water.
6.300	6.600	Geologist--Internal staff	Sandstone	Sandstone : munsell colour 7.5yr 6/8 reddish yellow; fracture; iron stained; clay/silt content increased from previous sample. Qtz and heavy minerals.
6.600	7.400	Geologist--Internal staff	Sandstone	Sandstone : munsell colour gley#1 n 8/ white; broken sandstone; very soft; dry. Sand as above but decrease in iron staining. Sandstone is very poorly sorted; fine to very coarse grained; clast supported; angular to sub rounded (mostly sub angular); predominantly qtz with minor iron staining. Up to 2% fine grained heavy minerals.
7.400	10.500	Geologist--Internal staff	Sandstone	Sandstone : qtz sandstone; variably consolidated and variable clay content (>10%). Iron staining in parts.
10.500	11.150	Geologist--Internal staff	Sand	Silty sand : munsell colour gley#1 n 8/ white; firm; moist. Very fine grained silty sand - up to 20% heavy minerals; micaceous? (~5%)
11.150	13.500	Geologist--Internal staff	Gravel	Clayey gravel : munsell colour gley#1 n 8/ white. Grains > 1cm diameter. Sub rounded. Common fine grained mica and heavy minerals. Iron stained laminations ~1.5cm thick (@13.25m; <5% clay). Iron stained 5cm layer at 11.5m. Fine pink laminations from 11.15 - 11.5m.
13.500	13.800	Geologist--Internal staff	Siltstone	Siltstone / clay : laminated stiff moist clay
13.800	13.900	Geologist--Internal staff	Sand	Silty sand : grey firm moist silty sand as for 10.5 - 11.15.
13.900	15.250	Geologist--Internal staff	Siltstone	Siltstone/clay : hard; moist grey siltstone/clay. Mottled orange; red; yellow at top. Some laminations evident (across ~10% of sample); qtz grains visible.
15.250	17.700	Geologist--Internal staff	Sand	Clayey sand : munsell colour 10yr 8/6 yellow and munsell colour 7.5yr 7/6 reddish yellow. Soft to firm; moist; saturated at 16.5m. Fine to coarse grained (predominantly coarse grained) qtz sand with rare qtz pebbles. Decreasing grain size with depth. Coarse grains are sub rounded to angular. Feldspathic (~10%; angular); micaceous (fine grains). Clay content variable. Common fine grained heavy minerals. Laminations of pink; orange and yellow down to 17m.
17.700	20.100	Geologist--Internal staff	Sand	Clayey sand : munsell colour 10yr 8/6 yellow and grey. Soft wet. Medium (predominant) to coarse grained sand; clayey (<5%).
20.100	22.500	Geologist--Internal staff	Sand	Clayey sand : as above
22.500	27.000	Geologist--Internal staff	Sand/Clay	Sand and clay : munsell colour 2.5y 7/8 yellow; wet. Interbedded sand and clay. Layers <50cm thick. Heavily iron stained; yellow laminations in clay (pink; grey; yellow) common. Sand beds have iron cemented nodules (munsell colour 10yr 3/6 dark yellowish brown). Sand layers have ferricrete; feldspathic (~20%); micaceous and fine grained heavy minerals. Fine to very coarse grained. Clay layers laminated grey and yellow.
27.000	27.350	Geologist--Internal staff	Clay	Clay : firm; laminated grey clay with minor sand lenses.



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From (mbGL)	To (mbGL)	Interpreted By	Substance	Lithological Description
27.350	28.100	Geologist--Internal staff	Sand	Sand : soft with 10cm laminated clay layer at 27.8m. Very coarse grained to gravel. Composition as above.
28.100	28.750	Geologist--Internal staff	Silt	Silt : soft; wet. Grey with minor yellowish iron staining. Micaceous and heavy minerals present
28.750	29.000	Geologist--Internal staff	Sand	Sand : soft; coarse grained sand. Qtz dominant; feldspathic (~25%)
29.000	29.250	Geologist--Internal staff	Silt	Silt : soft; wet. Grey; micaceous with heavy minerals.
29.250	29.500	Geologist--Internal staff	Sand	Sand : soft; wet; coarse grained as above
29.500	29.800	Geologist--Internal staff	Silt	Silt : soft; wet; laminated silt with minor sand layers. Sand as above. Silt is micaceous with strong well formed orange laminae (<3mm thick). Occassional dark grey layer approx 10cm with less developed laminations and more plastic (clay); and strongly micaceous. Bright orange at contact

Stratigraphy Log (Site reference: 70100007)

From (mbGL)	To (mbGL)	Interpreted By	Interpreted Date	Stratigraphy	Lithology1	Lithology2	Lithology3
0.000	29.800	Geologist--Internal staff	9/03/2011	Parmelia Fm	sand	clay	siltstone



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Advanced Data Summary (Site reference: 70100007 WIN Site ID: 70100007)

Readings by Project

Default Site Reference	Project Code	Project Name	First Measurement	Last Measurement	No of Measurements
70100007	MW-G-MIDWESTGDE	GW Dep Ecosystem Vulnerability in the Mid-West	3/12/2010	16/04/2012	32
70100007	MW-G-MIDWESTGDE	GW Dep Ecosystem Vulnerability in the Mid-West	16/02/2011	16/04/2012	356
70100007	WA-S-TSDATA	WA State-wide Time Series Data Collection	21/12/2010	26/05/2018	16280

Readings by Data Category

Default Site Reference	Data Category	First Measurement	Last Measurement	No of Measurements
70100007	Water level-flow - TS archive	21/12/2010	26/05/2018	16280
70100007	Water levels - discrete	3/12/2010	16/04/2012	32
70100007	Water quality indicators - discrete	16/02/2011	16/04/2012	356

Readings By Variable Type

Default Site Reference	Variable Type	First Measurement	Last Measurement	No of Measurements
70100007	Inorganic metals	16/02/2011	17/01/2012	133
70100007	Inorganic non-metals	16/02/2011	17/01/2012	63
70100007	Nutrients	16/02/2011	17/01/2012	49
70100007	Organics	16/02/2011	17/01/2012	7
70100007	Physical	16/02/2011	16/04/2012	104
70100007	Time series water levels	21/12/2010	26/05/2018	16280
70100007	Water level (discrete)	3/12/2010	16/04/2012	32