

EASTERN RIDGE AND JIMBLEBAR STYGOFAUNA MONITORING 2020/2021

PREPARED FOR BHP WESTERN AUSTRALIA IRON ORE

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Executive Summary

Introduction

BHP Western Australia Iron Ore (BHP WAIO) commissioned Stantec Australia Pty Ltd (Stantec), to complete the 2020/2021 Ethel Gorge stygofauna Threatened Ecological Community (TEC) compliance monitoring program (the Program). The Program aligns with conditions outlined in Ministerial Statement (MS) 1126, 478, 1037 and 1021, established for mining below the water table for the Eastern Ridge Orebody (OB) 23, 24, and 25, OB 31 and Jimblebar deposits, located within approximately 40 km of the town of Newman. The objective of the Program was to monitor the Ethel Gorge stygofauna TEC, in relation to potential impacts from BHP WAIO mining operations, which include mine dewatering, groundwater extraction, mine pit salinisation and surplus water discharge.

Survey Effort

The survey effort for the Program targeted a number of monitoring zones in the area, with monitoring zone 1 representing the Ethel Gorge stygofauna TEC and core habitat. A total of 50 samples were collected from 26 bores to assess groundwater quality and stygofauna abundance. This comprised two monitoring rounds, with 25 bores sampled in November 2020 (dry season) and 25 bores assessed in May 2021 (wet season). Above average rainfall was received during several months prior to the wet season sampling.

Groundwater quality measurements were recorded *in situ*, along with standing water levels (SWLs). Samples were also collected for chemical analysis, completed by a NATA-accredited laboratory. The analytical suite comprised pH, salinity, ionic composition, nutrients and metals. Stygofauna sampling aligned with regulatory technical guidance, comprising net hauling. Samples were subsequently sorted and identified in the laboratory. A number of amphipod and oligochaete specimens were also genetically sequenced to verify taxonomy.

The resulting groundwater and stygofauna data were analysed to determine seasonal trends and changes over time with previous monitoring rounds, associated with environmental conditions and/or mining operations. Species richness and survey effort was also interrogated using statistical analysis.

Groundwater Properties

The results of the Program indicated that groundwater quality was mostly below the groundwater trigger values (GTVs), or historic maxima, and trends were related to environmental and/or hydrogeological factors. The SWLs in both monitoring rounds were below the GTVs except for one bore, with increases related to groundwater recharge following rainfall after prolonged dry conditions. There were also some exceedances for groundwater quality across both seasons.

Groundwater pH was mostly alkaline, with several monitoring zones showing increasing trends over time. Salinity concentrations (including major ions) were elevated in two bores across both seasons, however remained below the 20% variance of the 80th percentile GTV. High levels of calcium were related to the calcareous environment of the Ethel Gorge aquifer system.

Nutrient exceedances above the 80th percentile GTVs were more evident in the dry season, likely attributed to lower rainfall compared to the wet season. Metal concentrations were generally below detection, with the exception of boron and manganese across monitoring zones, indicative of the natural enrichment of groundwaters. Currently, there is insufficient data at the appropriate detection limits to develop GTVs for metals, with increased sampling and analytical sensitivity required to develop a robust dataset that can be used for this purpose. However, there were no changes in groundwater quality from BHP WAIO operations evident in monitoring zone 1. Metal GTVs for barium, boron, manganese, molybdenum and zinc may be developed in the 2021/2022 Program if additional detectable concentrations become available across the monitoring zones. However, this would require a separate scope.

Stygofauna

A total of 26 stygofauna species were recorded during the Program, from six higher level taxonomic groups; Amphipoda, Bathynellacea, Copepoda, Isopoda, Ostracoda and Oligochaeta. This included 13 core taxa (taxa endemic to the wider Newman area, including the Ethel Gorge TEC). Of these, *Pilbaranella ethelensis*, *Pilbaranella* sp. and *Origocandona* 'BOS099' were new to the core taxa list. However, representatives of these taxa have been identified from the Ethel Gorge aquifer system during other studies.

During the dry season, more than 130 specimens were recorded, representing five higher level taxonomic groups and 18 taxa, including nine core taxa. Stygal abundance increased during the wet season, with 689 specimens across five higher level taxonomic groups and 19 taxa, eight of which were core taxa. The stygofauna numbers during the wet season were also comparatively higher than previous wet season

monitoring rounds in 2017 and 2020. This corresponded to increased standing water levels during this Program, reflecting above average rainfall, likely facilitating greater inflows of organic matter.

Consistent with previous monitoring rounds, the amphipod *Chydaekata acuminata* was the predominant core taxon. The isopod *Pygolabis humphreysi* and ostracod *Pilbaracandona eberhardi* are among the other core species that have been commonly recorded over time, including during this Program. The harpacticoid copepod *Nitocrella karanovici* has also been recorded in relatively high numbers although distribution has been temporally heterogeneous.

Nitocrella karanovici, a core species, has been identified as a potential indicator species. Of the other core species, *Chydaekata acuminata* may also warrant further investigation, and is common throughout the Ethel Gorge aquifer system. However, increased understanding of environmental tolerance levels is required to determine the suitability of these taxa as effective indicators of ecosystem health.

Conclusions and Recommendations

There were no impacts observed for stygofauna in relation to mining activities during the Program, based on SWLs and groundwater quality. However, there is insufficient data at appropriate detection levels to develop GTVs for metals and provide interpretation.

The findings of the Program along with previous monitoring rounds indicate that current groundwater management practices have been successful in mitigating potential impacts to the Ethel Gorge stygofauna TEC from BHP WAIO operations. It is also considered that adequate saturation of the core habitat has been maintained, enabling persistence of stygofauna.

Temporal trends note a pattern of decline in wet season stygofauna abundance between 2016 and 2020, with lower densities compared to previous monitoring rounds. This potentially reflects factors including reduced survey effort (fewer sites), removal of stygofauna during sampling, and prolonged dry conditions. The abundance during the (2021) wet season while also lower than the earlier monitoring rounds (2012 to 2016), showed an increase compared to 2017 and 2020. This corresponded to above average rainfall and demonstrated the capacity of the stygofauna population to respond under favourable conditions (likely increased organic matter associated with groundwater recharge).

Several recommendations for future monitoring and/or investigations have been outlined for consideration by BHP WAIO, based on the findings of the Program. These include:

- Increase the collection of metals data and improve the sensitivity of detection for analysis, to allow the development of a statistically robust dataset and determination of relevant GTVs, which should be undertaken separately to this Program;
- Increase the number of bores sampled, to clarify trends in stygofauna species richness and abundance;
- Undertake a separate, comprehensive review of stygofauna data, in order to:
 - Elucidate temporal and spatial changes in core species composition relative to hydrogeological characteristics of the area
 - Develop appropriate trigger levels for species richness and abundance, if possible, and;
 - Investigate potential indicator species from the core taxon list, focusing on distribution and tolerance limits.

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1. Introduction

1.1 Background

BHP Western Australia Iron Ore (BHP WAIO) commissioned Stantec Australia Pty Ltd (Stantec), to complete the 2020/2021 Ethel Gorge stygofauna Threatened Ecological Community (TEC) compliance monitoring program (the Program). The Program aligns with regulatory compliance conditions and the associated management plan (Douglas and Pickard 2014) for mining below the water table at the Eastern Ridge Orebody (OB 23, 24, and 25, OB 31 and Jimblebar deposits. These deposits are located within 40 km of the town of Newman, in the Pilbara bioregion (**Figure 1-1**).

Stygofauna monitoring and management is required to investigate potential impacts (dewatering changes on groundwater quality and habitat) on the Ethel Gorge TEC, from dewatering at Jimblebar and OB 31, and the subsequent discharge of excess groundwater into Ophthalmia Dam. The Program extends to Eastern Ridge, to ensure local stygofauna communities have not been impacted by dewatering at OB 23 and OB 24/25. It also adheres to Environmental Protection Authority's (EPA) Ministerial Statements (MS) 857 (Jimblebar), 478 (OB 23), 1037 (OB 24/25), and 1021 (OB 31), and BHP WAIO's Eastern Pilbara Water Resource Management Plan (EPWRMP) (Douglas and Pickard 2014). The latter comprises adaptive management, with monitoring against outcomes-based objectives and early warning triggers and thresholds, with the TEC identified as an important environmental receptor (Douglas and Pickard 2014).

The Ethel Gorge stygofauna TEC is located 15 km northeast of Newman, adjacent to Eastern Ridge. It occurs on the Fortescue River and Ophthalmia Dam floodplain, downstream of the confluence of Homestead Creek (RPS 2013). The TEC, which was first detected in 1997, comprises a diverse stygofauna assemblage (Eberhard and Humphreys 1999). The hydrogeological units that host the highest species richness are the shallow alluvial and calcrete aquifers within the gorge, and approximately 5 km downstream (Bennelongia 2014; MWH 2016a; RPS 2013). Stygofauna monitoring at Ethel Gorge has been ongoing since 2003 (the monitoring program), with surveys conducted by several consultants.

1.2 Objective and Scope

The objective of the Program was to monitor the Ethel Gorge Stygofauna TEC, in relation to potential impacts from BHP WAIO mining operations. To address the objective, surveys were undertaken in the dry (2020) and wet season (2021), with the scope of the Program comprising the following:

Groundwater

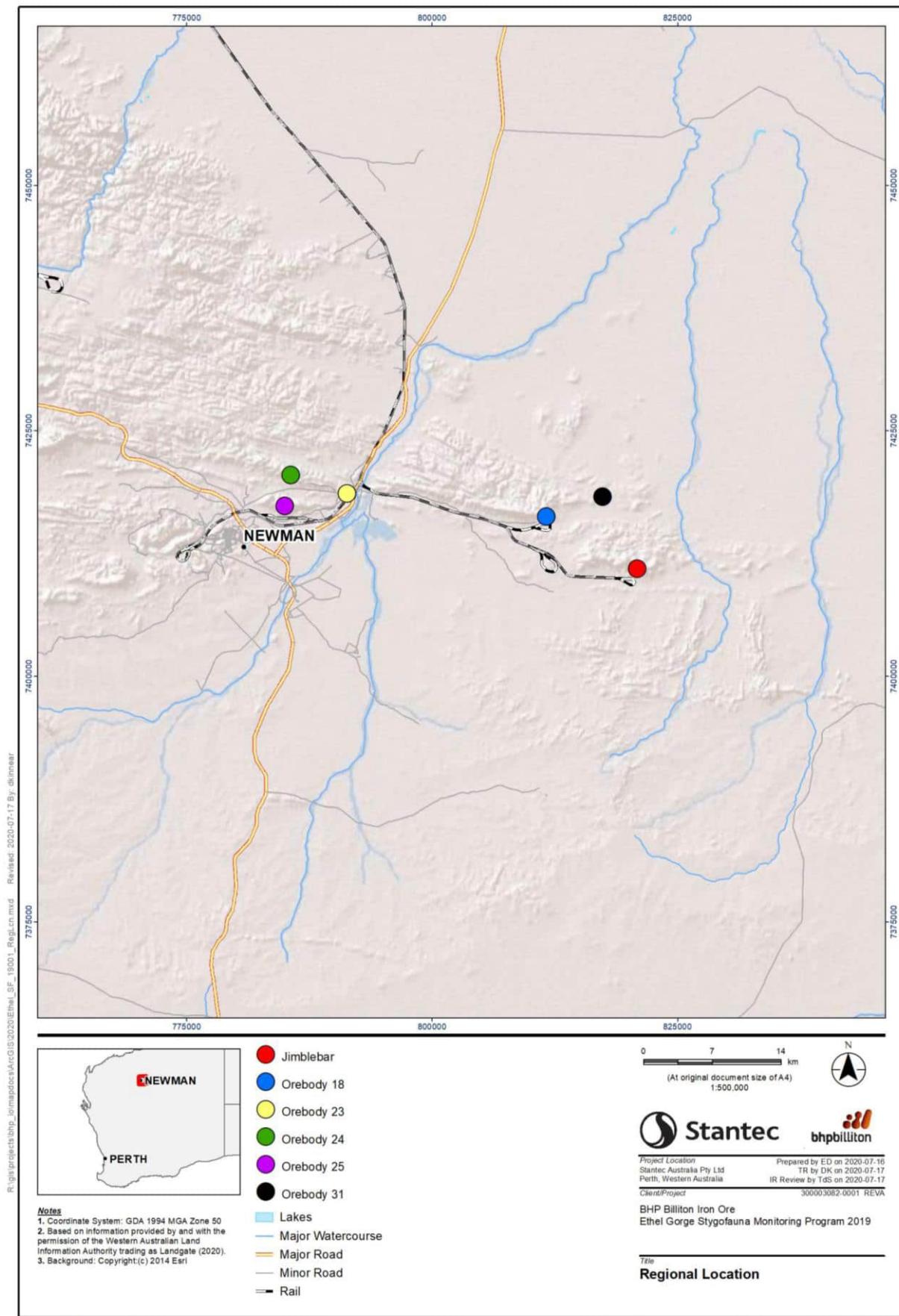
- Monitor groundwater quality and levels to investigate the potential impacts of surrounding mining operations of the system, in accordance with regulatory conditions.
- Analyse groundwater quality data, reporting on elevated parameters or exceedances.
- Develop a statistically robust baseline dataset for groundwater (including metal concentrations) and refine trigger levels adhering to ANZECC & ARMCANZ (2000).

Stygofauna

- Assess stygofauna abundance and species richness and document and map relevant species records over time.
- Investigate the use of stygofauna indicator species, utilising species richness and abundance to indicate ecosystem health.
- Ensure that stygofauna taxonomy is current and aligns with historic survey data and conduct DNA analysis to address specific taxonomic and/or environmental monitoring requirements.
- Interrogate stygofauna data, in relation to core species and groundwater quality data (specifically salinity and groundwater levels).

Recommendations

- Implement recommendations from previous monitoring including refine sampling bores and locations and investigate the population of core stygofauna species using molecular analysis, where possible.



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Figure 1-1: Regional location of the BHPWAIO deposits relevant to the Program.

1.3 Hydrogeology

The key features of the groundwater system at Ethel Gorge are as follows (RPS 2013):

- A highly permeable alluvial aquifer comprising an upper unit of sandy-alluvium and calcrete and a lower unit of gravelly-alluvium. The two units are separated by an extensive low permeability clay sequence.
- Hydraulic behaviour of the Ethel Gorge groundwater system is dominated by Ophthalmia Dam – a managed aquifer recharge structure that has been constructed on the Fortescue River flood plain. The dam serves to substantially increase groundwater recharge and hydraulic loading to the alluvial aquifer.
- The upper alluvial aquifer is unconfined and receives recharge from direct infiltration from creek flow events. In addition to seasonal recharge along the creek channels, the upper aquifer also receives most of the water seeping from Ophthalmia Dam and this supports long-term trends in the volume of water stored in the aquifer and water levels.
- The lower aquifer is confined by the overlying clay and is predominantly subject to hydraulic loading from Ophthalmia Dam.

Groundwater levels range between 0 and 10 mbgl across the area, with recharge predominantly as seepage from Ophthalmia Dam, and as direct infiltrations from streamflow events (along the Fortescue channel) and several creeks. Recharge occurs mainly to the shallow alluvial aquifer, with some leakage into the underlying deep alluvial aquifer.

The Ethel Gorge stygofauna TEC occurs in the shallow alluvial aquifer from an area on the Fortescue River floodplain approximately 2 km upstream of the gorge to approximately 4 km downstream of the gorge entrance. This coincides with a thick accumulation of calcrete (in excess of 20 to 40 m in thickness) occurring at less than 20 mbgl and often as outcrop.

Groundwater levels typically fluctuate in response to climate, with dewatering also causing water level reductions across the area. However, these are mostly associated with the deep alluvial aquifer and represent a depressurisation response. In the shallow alluvial aquifer, water levels have generally declined by less than 10 m, and the calcrete of the Ethel Gorge TEC has remained substantially saturated (RPS 2013).

1.4 Ethel Gorge Stygofauna Community

The Ethel Gorge TEC is currently categorised as Endangered; an ecological community that has been adequately surveyed and/or has a limited distribution, with few isolated occurrences that are very vulnerable to known threatening processes (Subterranean Ecology 2013). Monitoring of the TEC and surrounds has been undertaken for over 15 years (**Table 1-1**), with approximately 80 species recorded from the Ethel Gorge aquifer and surrounds.

During this time, core habitat has also been defined (**Figure 2-1**), which is known to support approximately 40 key species of stygofauna. These core species were established in 2013, as part of mapping and characterisation of the Ethel Gorge TEC (Bennelongia 2013). The assemblage is characterised by copepods and ostracods, with oligochaetes, amphipods and bathynellids also prominent (Bennelongia 2013). While copepods and ostracods have been numerically abundant, amphipods and bathynellids have been the most diverse component of the assemblage (Stantec 2017).

As part of monitoring requirements for the Ethel Gorge TEC, monitoring zones have been established, based on hydrological and hydrogeological conditions, to facilitate management of sensitive receptors. Monitoring zone 1 predominantly corresponds to the TEC and the assessment of groundwater levels and groundwater quality (Douglas and Pickard 2014). Thresholds (trigger values) have been established to assist in monitoring and management of these criteria, along with sampling of stygofauna, to align with the various regulatory conditions (Douglas and Pickard 2014).

Table 1-1: Surveys and ongoing Monitoring Program for wider Ethel Gorge area.

Year	Survey Timing	Sampler/Author	Reference	Data Available?
2003	Dry Season	Not Available	Not Available	Yes
2005	Not Available	Biota Environmental Sciences	Not Available	No
2006	Not Available	Biota Environmental Sciences	Not Available	No
2007	Dry Season	Biota Environmental Sciences	Not Available	Yes
2008	Dry Season	Ecowise Environmental	Not Available	Yes
2009	Wet and Dry Season	Ecowise Environmental, Subterranean Ecology	Not Available	Yes
2010	Wet and Dry Season	Subterranean Ecology	Not Available	Yes
2011	Wet Season	Subterranean Ecology	Not Available	Yes
2012	Wet Season	Subterranean Ecology	Subterranean Ecology (2012)	Yes
2013	Dry Season	Subterranean Ecology	Subterranean Ecology (2014)	Yes
2014	Wet and Dry Season	Subterranean Ecology, Stantec (MWH)	Subterranean Ecology (2014), MWH (2015)	Yes
2015	Wet Season	Stantec (MWH)	MWH (2015)	Yes
2016	Wet Season	Stantec (MWH)	MWH (2016)	Yes
2017	Wet Season	Stantec	Stantec (2017)	Yes
2019	Dry Season	Stantec	Stantec (2020)	Yes
2020	Wet and Dry Season	Stantec	Stantec (2020)	Yes
2021	Wet Season	Stantec	This report	Yes

1.5 Climate

The climate of the Pilbara bioregion is classified as semi-arid with very hot summers and mild winters. Rainfall occurs during the wet season (December to April) and is typically in response to ex-tropical cyclones or isolated storm activity. However, evaporation rates are high, and temperature often exceed 38°C in summer. Rainfall recorded at the Bureau of Meteorology (Bom) weather station number 007176 between July 2020 and June 2021 was 356 mm (**Figure 1-2**), and was above the long-term annual average (316 mm) for Newman (Bureau of Meteorology 2020b). This was attributed to December 2020 and February and April 2021 which each exceeded the monthly averages, contributing substantial rainfall after a prolonged dry period. Notably, the total for February 2021 (169 mm) was more than double the monthly average (72 mm).

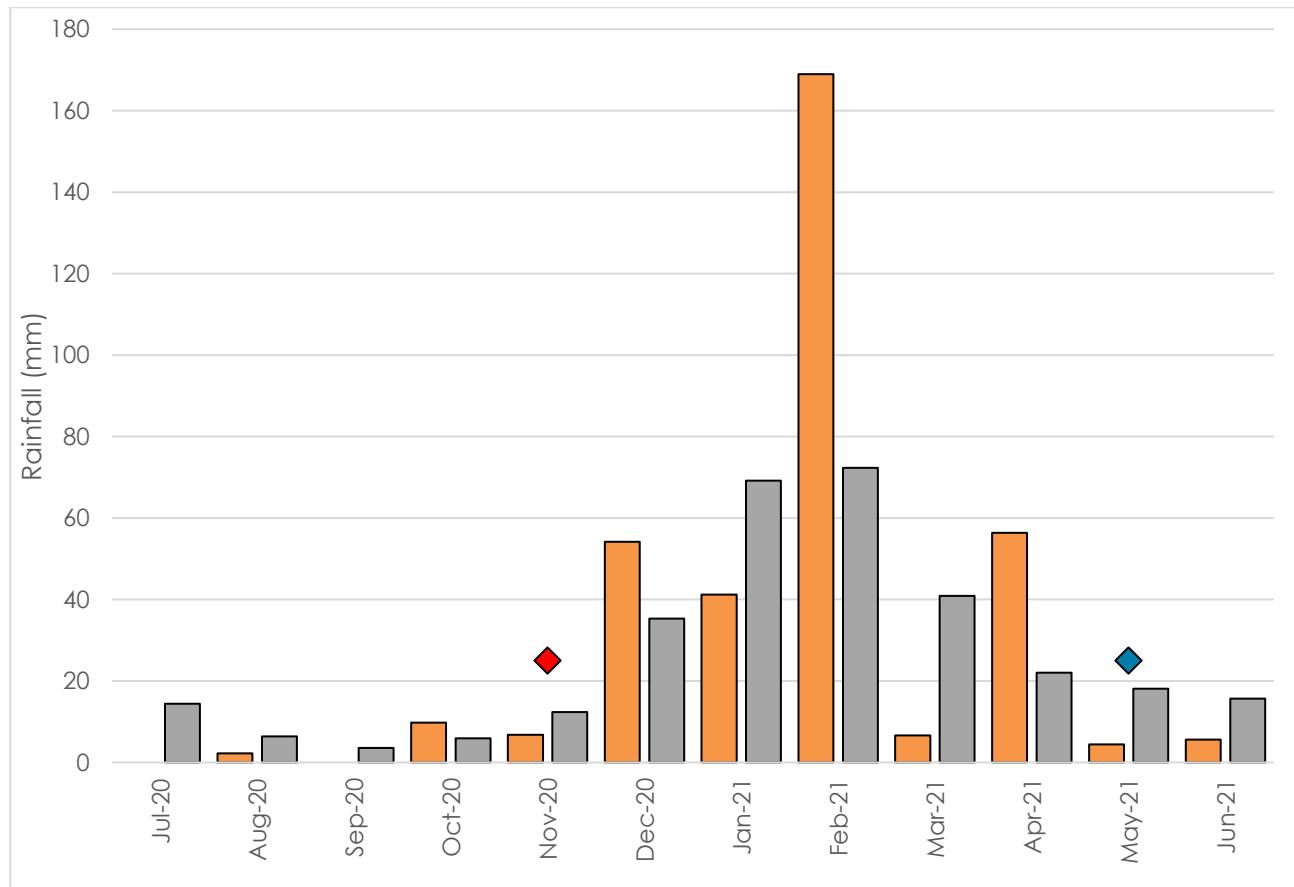


Figure 1-2: Monthly rainfall at Newman (■), compared to the long-term average monthly (■) rainfall. Dry (◆) and wet (◆) season surveys of the Program indicated. Source: (Bureau of Meteorology 2020a).

2. Methods

2.1 Survey Design

The survey design for the Program was in accordance with the MS conditions and the EPWRMP, to manage the Ethel Gorge stygofauna TEC, and was also generally consistent with previous monitoring. Six monitoring zones (**Table 2-1**) were incorporated into the Program, across the dry and wet seasons. Monitoring was conducted to assess changes in standing water levels (SWLs) and groundwater quality. Stygofauna sampling was also completed to assess diversity and abundance.

A total of 50 samples across 26 bores were targeted during the Program; 25 bores were sampled during a dry season trip (November 2020), and 25 bores were sampled during a single wet season trip (May 2021) (**Figure 2-1, Appendix A**). Over the two seasons, several bores were inaccessible due to heavy rainfall and/or other on-ground restrictions. Detailed methods, outlining groundwater and stygofauna assessment are provided in the subsequent sections. The previous survey effort in the area (Bennelongia 2009;2013; ENV Australia 2011; MWH 2015;2016a; SPSS 1998; Stantec 2017; Subterranean Ecology 2012b;2013;2014), is shown in **Figure 2-2**.

A Fauna taking (biological assessment) licence (Regulation 27, Biodiversity Conservation Regulations 2018), was obtained from the Department of Biodiversity, Conservation and Attractions (DBCA) prior to the commencement of the field surveys (Licence number BA27000112). The 2020 dry season and 2021 wet season monitoring rounds were led by Thomas de Silva (**Table 2-2**).

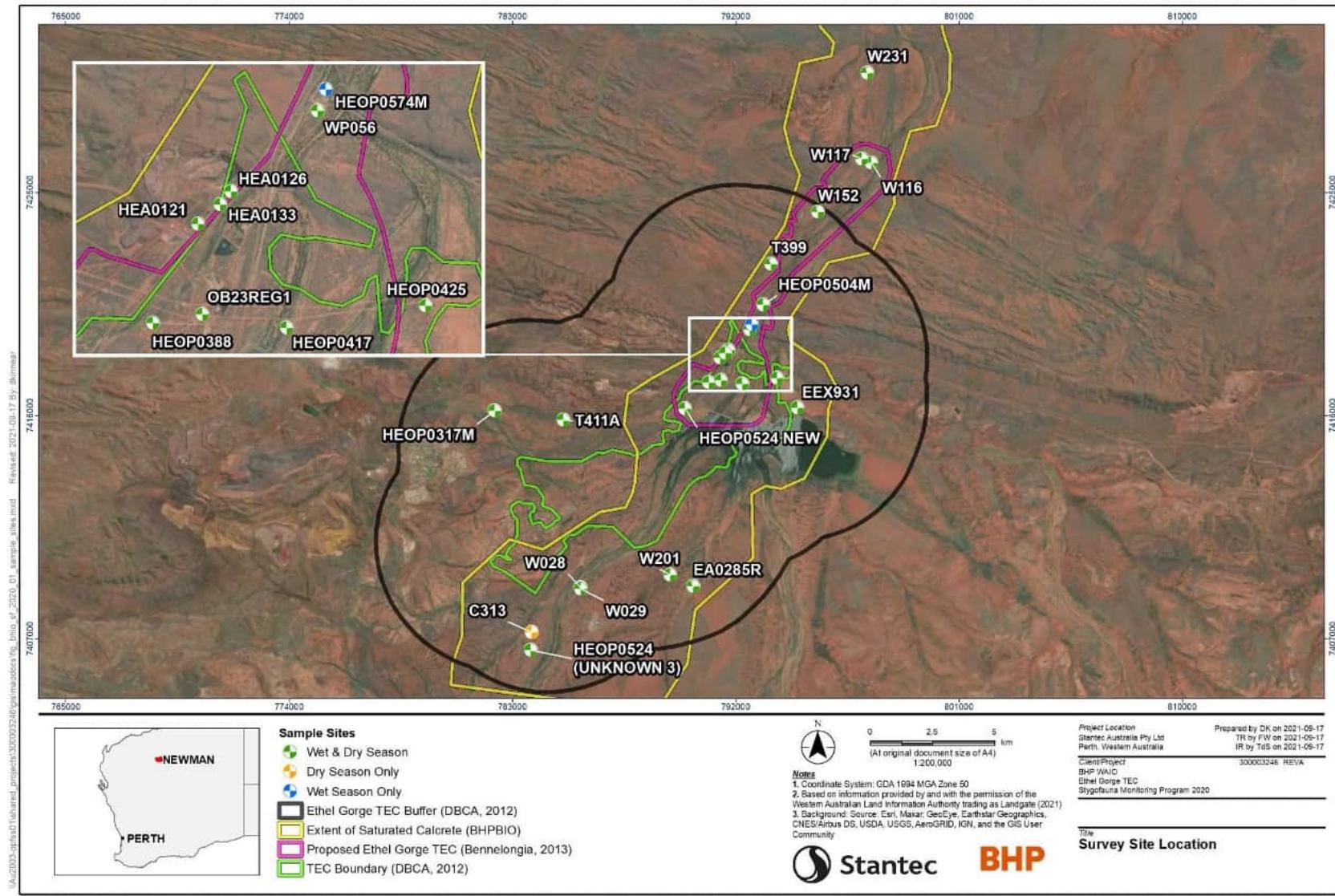
Table 2-1: Monitoring zone descriptions for the Program.

Monitoring Zone	Description
1. Ethel Gorge habitat stygofauna TEC	Core habitat area of TEC comprised of main calcrete body within confluence zone of Fortescue River with both Homestead Creek and Shovelanna Creek.
1 B. Early Warning	Downstream of Ophthalmia Dam between MZ 4 and MZ 1.
2. Shovelanna Creek*	Aquifer system associated with creek prior to entering confluence zone with Fortescue River.
3. Homestead Creek	Aquifer system associated with creek prior to entering confluence zone with Fortescue River.
4. Ophthalmia Dam	Aquifer system associated with Ophthalmia Dam and Fortescue River and Warrawanda Creek catchments south of dam.
5. Fortescue River	Aquifer system associated with Fortescue River North of Ethel Gorge stygofauna TEC within MZ 1.
6. Whaleback Creek	Aquifer system associated with Whaleback Creek prior to entering confluence zone with Fortescue River (MZ 1B) and MZ 4.

Note: Monitoring zones 1, 2, 3 and 4 established by Douglas and Pickard (2014), and 1B, 5 and 6 established by MWH 2015; * no bores were accessible from this zone during the Program.

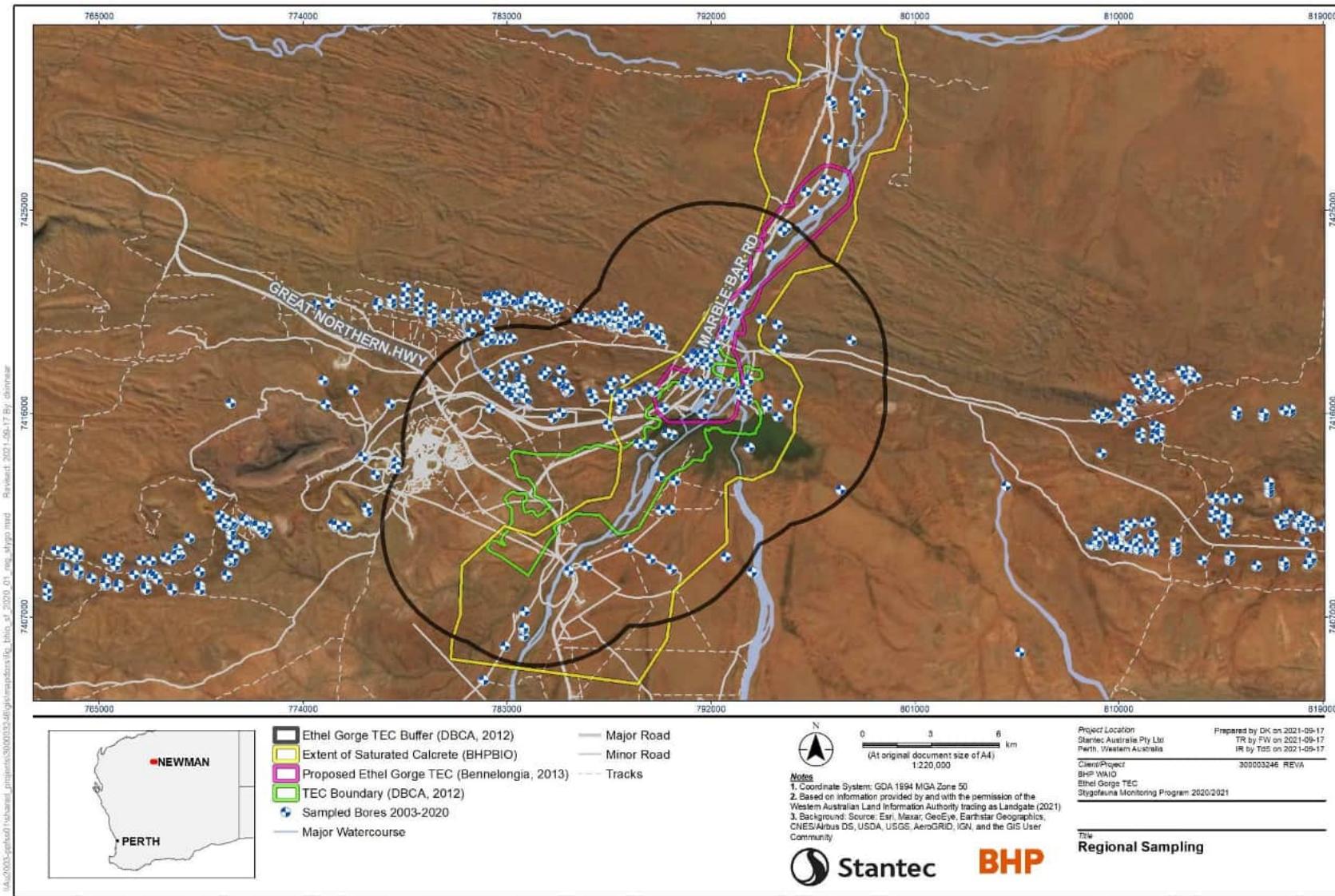
Table 2-2: Stantec personnel involved in the field work for the Program.

Name	Qualifications and Experience	Field Survey
Thomas de Silva (Senior Scientist)	BSc Marine Biology and Environ. Biology (10 yrs exp.)	Dry season 2020 / Wet season 2021
Jake Daviot (Intermediate Scientist)	BSc Marine Ecology (Hons) (3 yrs exp.)	Dry season 2020 / Wet season 2021



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Figure 2-1: Stygofauna bore locations for the Program.



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Figure 2-2: Stygofauna bore locations monitored in the area from 2003 to 2021 during previous and current surveys.

2.2 Groundwater Assessment

2.2.1 Groundwater Properties

During the dry and wet seasons, the SWLs were measured at each bore using a Solinst 101 water level meter. The end of hole (EoH) was estimated using the number of rotations of the sampling winch reel, while conducting stygofauna sampling.

Basic groundwater physicochemical parameters (pH, water temperature, dissolved oxygen; DO, electrical conductivity; EC, total dissolved solids; TDS and reduction-oxidation potential; Redox) were measured and recorded *in situ*. Groundwater was collected using a bailer from the upper surface of the bore column, with water quality measurements recorded from a YSI water quality meter.

Additional groundwater samples collected using the bailer were placed into appropriate sterilised bottles provided by the NATA-accredited Australian Laboratory Services (ALS), containing preservative where required. Bottles were completely filled with water and sealed, excluding air from the samples. Following collection, the samples were couriered to ALS (located in the Perth metropolitan suburb of Malaga).

The analytical suite for groundwater comprised pH, TDS, EC, major ions (alkalinity, calcium, chloride, potassium, magnesium, sodium and sulphate), nutrients (nitrate+nitrite, nitrogen, and phosphorus) and metals (aluminium, arsenic, barium, boron, cadmium, chromium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, zinc). Holding times were met for all parameters except for analytical pH in both seasons, and TDS at some sites across the program and results should be considered indicative only.

2.2.2 Groundwater Trigger Values

Low risk early warning trigger values have previously been derived for groundwater quality for the Ethel Gorge stygofauna TEC, aligning with the EPWRMP, and referred to as groundwater trigger values (GTVs). The GTVs for each monitoring zone, based on the EPWRMP are presented in **Table 2-3** with a focus on changes in groundwater levels and/or salinity (EC/TDS) variances.

GTVs have also been developed for groundwater quality by Stantec, following methodology outlined in ANZECC & ARMCANZ (2000), where an appropriate number of records exist ($n>30$). These were developed from the amalgamated historic data (including this Program). The GTVs comprise the 20th (for pH only) and 80th percentiles of the dataset for each parameter, for monitoring zone 1 (Ethel Gorge) and for all monitoring zones, to provide regional context (**Table 2-4**). Pre-treatment of the data involved the removal of outliers for each parameter; values ± 4 standard deviations from the mean. Separate GTVs were established for the dry and wet seasons. It should be noted that currently, there is not a full suite of GTVs for metals, due to the limited number of records.

Exceedances of GTVs for a given parameter are an early warning system, which may require further investigation and potential implementation of management options, however, only once the environmental and operational context has been considered. Exceedances of GTVs should also consider historic spatial and temporal trends. They are not considered to be a threshold value that is detrimental or causes adverse effects to the Ethel Gorge stygofauna TEC.

Table 2-3: Groundwater trigger values (GTVs) within designated monitoring zones for the Program.

Monitoring Zone	Assessment Component	Groundwater Trigger Value (GTV)
1. Ethel Gorge habitat stygofauna TEC	SWL	Lower SWL +/- >5 m or at rate >4 m/year
		Upper SWL >2 mbgl
	Historic variance in groundwater salinity (TDS/EC)	TDS >2,500 mg/L
		EC >4,545 µS/cm
1B. Early Warning	Upper SWL	>2 mbgl
	Groundwater quality (TDS)	>20 % variance from interpreted seasonal baseline
2. Shovelanna Creek	Groundwater quality (TDS)	>20% variance from interpreted seasonal average
3. Homestead Creek	SWL	+/->6 m or at rate of change >4 m/year
	Groundwater quality (TDS)	>20 % variance from interpreted seasonal baseline
4. Ophthalmia Dam	SWL	Not defined
	Groundwater quality (TDS)	>20 % variance from interpreted seasonal baseline
5. Fortescue River	SWL	Not defined
	Groundwater quality (TDS)	Not defined
6. Whaleback Creek	SWL	Not defined
	Groundwater quality (TDS)	Not defined

Note: Monitoring zones 1, 2, 3 and 4 established Douglas and Pickard (2014), and 1B, 5 and 6 established by (MWH 2015); GTVs developed as part of the EPWRMP.

Table 2-4: Groundwater trigger values (GTVs) derived for groundwater quality for the Program.

Parameter	Groundwater Trigger Values (GTVs)		
	20 th percentile	80 th percentile	20% Variance*
Basic			
pH	✓	✓	-
TDS	-	✓	✓
EC	-	✓	✓
Major Ions	Sodium	-	✓
	Magnesium	-	✓
	Potassium	-	✓
	Calcium	-	✓
	Chloride	-	✓
	Sulphate	-	✓
	Total Alkalinity	-	✓
	Total Cations	-	✓
	Total Anions	-	✓
Nutrients	Ionic Balance	-	✓
	Total Nitrogen	-	✓
	Nitrate + Nitrite	-	✓
	Total Phosphorus	-	✓

Note: *indicates GTVs developed as part of the EPWRMP.

2.3 Stygofauna Assessment

2.3.1 Haul Net Sampling

Stygofauna were sampled using haul nets (Allford et al. 2008) during both monitoring rounds (dry and wet seasons) for the Program. This method is widely considered the most efficient method to retrieve stygofauna from bores (Allford et al. 2008). Sampling was consistent with the procedures outlined in the Environmental Protection Authority (EPA) Technical Guidance Sampling Methods for Subterranean Fauna Survey (2016). The sampling method was as follows:

- samples were collected using two weighted haul nets with mesh sizes of 150 µm and 50 µm, with each net fitted with a 70 ml plastic collection vial;
- the 150 µm net was lowered first, to the base of the bore;
- once at the base of the bore, the net was gently raised up and down to agitate the sediments;
- the net was then raised slowly, to minimise the 'bow wave' effect that may result in the loss of specimens, filtering the stygofauna from the water column on retrieval;
- once retrieved, the collection vial and net were rinsed into a collection pail;
- this process was repeated three times alternating with three hauls using the 50 µm mesh net;
- following the final haul, the contents were filtered through a wide aperture 50 µm mesh net, rinsed with 100% undenatured ethanol and transferred to a 250 mL polypropylene vial for storage in 100% ethanol;
- to prevent cross-contamination, all sampling equipment was washed thoroughly with Decon 90 (2 to 5% concentration) and rinsed with potable water after sampling was completed at each bore;
- samples were placed into eskies with ice bricks in the field, prior to being transferred into a refrigerated environment on-site at the end of each survey day; and
- samples were couriered back to the Stantec laboratory in Perth, where they were stored in 100% ethanol, at approximately minus 20°C.

2.3.2 Sorting and Identification of Specimens

Preserved stygofauna samples were sorted manually under Leica MZ6, MZ7.5 and M80 stereomicroscopes. Sorting was conducted by suitably qualified scientist's Dr Erin Thomas and Jake Daviot of Stantec. Sorted specimens were preserved in 100% ethanol and were refrigerated at approximately -18 to -20°C to ensure viability for DNA analysis.

Identification was carried out to species or morphospecies level for most stygofauna taxa, using published literature and unpublished keys and taxon descriptions. Identification was undertaken by suitably qualified scientist's Dr Erin Thomas and Thomas de Silva of Stantec. Species determination was verified using genetic analysis undertaken by Dr Remko Leijss of the South Australian Museum (SAM). Copepods and ostracods were identified by specialist taxonomists Jane McRae and Dr Stuart Halse respectively.

2.3.3 WAMinials Descriptions

No new stygofauna taxa representative of core species from the Ethel Gorge TEC were submitted to WAMinials during the Program. However, in 2018, *Pilbaranella ethelensis* of the family Bathynellidae was described from the Ethel Gorge groundwater system (Perina 2018). Stantec continues to liaise with specialists regarding revised and relevant descriptions, and where relevant, descriptions may be uploaded to WAMinials by the authors.

2.3.4 Species Richness and Abundance Analysis

Interrogation of stygofauna species richness and abundance was undertaken for the Program and available historic data. Due to differences in survey effort, including sample locations and seasonality, mean species richness and abundance was calculated per bore to standardise data for comparison. Minimum and maximum statistics were also derived for additional context.

The EstimateS software package version 9.1.0 (Colwell 2013) was also used to investigate species richness and survey effort for the core stygofauna species, based on monitoring data from November 2009 to May 2021. The analysis used species accumulation rarefaction and extrapolation curves, and species richness estimators using incidence and abundance data. The species richness data provide a statistical evaluation of the proportion of the stygofauna assemblage detected. A range in the number of species predicted to form the core assemblage was provided using seven estimators (ACE, Bootstrap, Chao1, Chao2, ICE, Jack 1 and Jack 2), which is statistically more robust (Hortal 2006). Two data sets were used for the analyses; the first included core species (taxa endemic to the wider Newman area, including the Ethel Gorge TEC) for all monitoring zones and the second data set encompassed core species for MZ 1 only. The taxa included in the analysis are listed in **Appendix G**.

2.3.5 Limitations of Assessment

2.3.5.1 Field Survey Limitations

There were no limitations for the field survey during the 2020/2021 program.

2.3.5.2 Groundwater Quality limitations

While development of GTVs for metals in an important objective of the Program there is currently insufficient data with increased sampling and analytical sensitivity required to develop a robust dataset that can be used for this purpose. Metal GTVs for barium, boron, manganese, molybdenum and zinc may be developed, if current trends in assessable values continue across the monitoring zones, although would require a separate scope.

2.3.5.3 Specimen Identification, Assessment and Taxonomic Resolution

Stygofauna are inherently difficult to assess, owing to their inhabitation of cryptic, concealed habitats. Although such fauna are becoming increasingly well understood, there still remains a large degree of uncertainty surrounding the taxonomy and ecological preferences of many taxa, with taxonomic frameworks poorly developed or even absent for many groups. For the Program, specimens were identified to the lowest taxonomic level, where possible. However, specimens may not always be identified to the level of species or morphospecies due to:

- loss or damage of important taxonomic features during collection and/or sorting of specimens;
- lack of adult specimens;
- lack of specimens of the correct sex for identification;
- limitation in taxonomy, in that the current state of taxonomy for a particular group is insufficiently advanced, and/or relevant taxonomic keys and descriptions are lacking; or
- contamination or failure of DNA sequencing during genetic analysis.

While every effort has been made to assess the taxonomy and distribution of the stygofauna collected using in-house data collections, publications, publicly available reports, and information provided by specialist taxonomists, some assessments may be limited if specialist information was unavailable.

3. Results and Discussion

3.1 Groundwater Properties

3.1.1 Standing Water Levels

The standing water levels (SWL) recorded within each monitoring zone during the dry (November 2020) and wet (May 2021) seasons were assessed according to the established trigger thresholds (**Table 2-1**). The results have been summarised below.

- Monitoring zone 1 (MZ 1): The mean SWL recorded in November 2020 (497.2 AHD) was 0.9 m higher than the dry season mean (496.3 AHD) (**Figure 3-1, Appendix B**). All bores had an increase in SWL compared to the last dry season survey (December 2019), ranging from +0.16 m (HEOP0504) to +5.95 m (OB23REG1) which exceeded the >4 m/year GTV. However, all other bores remained below the 2 mbgl GTV (**Figure 3-1, Appendix B**).
- Monitoring zone 1 (MZ 1): The mean SWL recorded in May 2021 (498.7 AHD) was 0.6 m higher than the wet season mean (498.1 AHD) (**Figure 3-1, Appendix B**). This was attributed to above average rainfall during the monitoring period after a prolonged dry period. All bores had an increase in SWL compared to the last wet season survey (March 2020 survey), ranging from +0.71 (HEOP0462M) to +2.55 m (OB23REG1). All remained below the 2 mbgl variance between seasonal surveys GTV (**Figure 3-1, Appendix B**).
- Monitoring zone 1 B (MZ 1 B): The SWL recorded in November 2020 at EEX931 (506.9 AHD) was 2.2 m higher than the dry season mean (504.7 AHD), compared to May 2021 (507.3 AHD), which was 2.2 m higher than wet season mean (505.04 AHD). Compared to the last survey at EEX931, there was difference of +0.47 m in the dry season and +0.61 m in the wet season, reflecting an increased rainfall from the previous year after a prolonged dry period. These levels were below the 2 mbgl lower SWL GTV (**Figure 3-1, Appendix B**).
- Monitoring zone 3 (MZ 3): The SWL recorded in November 2020 at HEOP0524 – NEW (502.48 AHD) and T411A (504.03 AHD) exceeded the dry season mean (497.31 AHD) by 5.17 m and 6.72 ml, respectively (Figure 3-1, Appendix B). HEOP0524-NEW is a new site, with no previous data for comparison while historically, SWL at T411A has been higher than the dry season mean for monitoring zone 3. The mean SWL recorded in May 2021 (500.97 AHD) was 0.86 m lower than the wet season mean (501.83 AHD) (**Figure 3-1, Appendix B**).
- Monitoring zone 4 (MZ 4): The mean SWL recorded in November 2020 (517.21 AHD) was higher than the dry season mean (516.33 AHD) (**Figure 3-1, Appendix B**). The SWL mean recorded in May 2021 (516.63 AHD) was slightly lower than the wet season mean (517.47). All bores recorded slight increases in SWLs compared to previous dry season figures due to recharge.
- Monitoring zone 5 (MZ 5): The SWL recorded was similar to previous historic records for both seasons, albeit marginally higher (**Figure 3-1, Appendix B**).
- Monitoring zone 6 (MZ 6): The only bore in this zone, HEOP0317M (W013) has recorded relatively consistent groundwater levels since 2010, with limited change during this Program (**Figure 3-1, Appendix B**).
- Groundwater levels across all bores in both seasons were below the GTVs. Variations between monitoring zones can be attributed to the prolonged dry conditions experienced prior to this Program with groundwater levels responding to recharge from above average monthly rainfall in the months preceding the wet season survey.

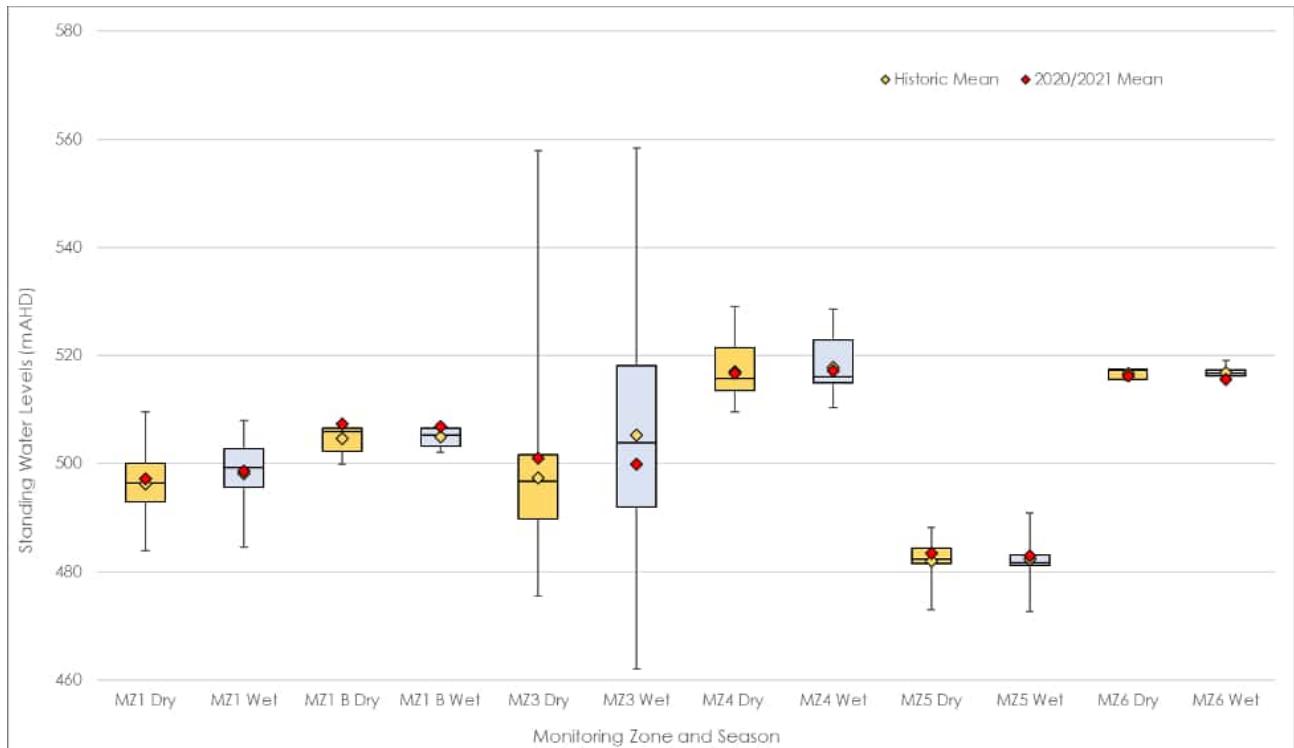


Figure 3-1: Comparison of SWLs for each monitoring zone and across dry and wet seasons, compared to the GTVs and seasonal means.

3.1.2 Groundwater Quality

During the Program, groundwater pH ranged from 4.95 (MZ 4 bore W201) to 8.55 (MZ 1 B bore EEX931) in the dry season (**Table 3-1, Table 3-3**), a range that spans from very strongly acidic to moderately alkaline (Foged 1978). In the wet season, groundwater pH ranged from 5.7 (MZ 4 bore W021) to 8.62 (MZ 1 bore HEOP0504) (**Table 3-2**) and was classified as moderately acidic to strongly alkaline (Foged 1978) with less exceedances than the dry season. While the majority of values exceeded the 80th percentile GTV for pH, they were within the historic pH range (**Figure 3-2**). Since 2009, pH during the dry season has ranged from 2.29 (MZ 3) to more than 9.7 (MZ 1), and in the wet season has ranged 3.16 (MZ 3) to more than 9.3 (MZ 4) (**Appendix C**). Over time there has also been an increase in pH at MZ 1, MZ 1B, MZ 3, MZ 5 and MZ 6, while there has been a decrease at MZ 4 (**Appendix C**).

Groundwater pH appears to be highly dependent on rainfall within local catchments (Stantec 2017). Despite the minor GTV exceedances recorded during the Program, pH was within the known tolerance limits of stygofauna. The most diverse stygofauna communities are often associated with calcareous environments between pH 7.2 and 8.2 (Humphreys 2008). In addition, while low pH can restrict stygofauna distribution, some ostracods have been documented from pH as low as 4.4 (Reeves et al. 2007).

Groundwater salinity (EC) during the Program ranged from 830 µS/cm (MZ 3 bore T411A) to 5,200 µS/cm (MZ 1 bore HEOP0425) in the dry season (**Table 3-1**), and from 599 µS/cm (MZ 3 bore HEOP0524 (NEW)) to 5,090 µS/cm (MZ 1 bore HEOP0425) during the wet season (**Table 3-2**). The wet and dry season salinities were within previous historic maxima (**Figure 3-3**). However, two bores exceeded the 80th percentile GTV in both seasons; HEOP0425 (MZ 1) and EA0285R (MZ 4), with salinity concentrations above 4,000 µS/cm exceeding the prescribed 20% variance GTV for salinity during the Program (**Table 3-3**). This pattern is consistent with historic salinities from these sites that exceeded the 80th percentile GTV during the wet and dry seasons since sampling of these bores began in November 2009 and April 2012, respectively (Stantec 2020a).

Previously, salinities of 6,600 µS/cm (MZ 1 bore HEOP0425) and 8,613 µS/cm (MZ 1 bore OB23REG1) have been recorded from groundwater in the dry (2009) and wet (2012) season, respectively (**Appendix D**). There are no clear trends evident over time, with variations instead likely related to rainfall and recharge events. The Ethel Gorge stygofauna TEC is typically associated with salinities below 6,600 µS/cm, with the exception of some copepod and oligochaete representatives, known to withstand higher concentrations of up to 10,000 µS/cm (MWH 2016b).

There were nine bores in the dry season (**Table 3-1**) and seven bores in the wet season (**Table 3-2**) that exceeded the 80th percentile GTVs for the six major ions (Na, Mg, K, Ca, Cl and S) during the Program (**Figure 3-4, Figure 3-5**). These exceedances mostly took place at bores HEOP0425 and W117 at MZ 1, HEA0133 at MZ 3, and EA0285R and HEOP0524 at MZ 4. During the Program, several bores also had magnesium and chloride exceedances above the 80th percentile GTV during the dry season, which may be related to prolonged dry conditions and evapoconcentration of groundwater within the aquifer (Boulton and Brock 1999). In the wet season, GTV exceedances for major ions typically decreased due to rainfall recharge. Regardless, concentrations during the Program were below historic maxima, with no obvious trends over time.

Geochemical characteristics, including major ion concentrations are subject to seasonal variations, defined by the hydrogeological composition, groundwater residence time and flow conditions (Bakalowicz 1994). This is consistent with the results of this Program and historic data, with the ionic composition of the Ethel Gorge aquifer driven by environmental factors such as climate; specifically, rainfall and subsequent recharge.

Nutrient levels during the Program were variable, with some exceedances of the 80th percentile GTVs (**Table 3-1, Table 3-2**). There were nine bores that exceeded the 80th percentile for total nitrogen and four bores with total phosphorous exceedances during the dry season; typically, these comprised the same bores from MZ 3 and MZ 4. This pattern was consistent with that of 2019. The number of exceedances decreased slightly during the wet season, with six bores for total nitrogen and three bores for total phosphorous, across MZ 3, MZ 4 and MZ 5. The maximum concentration of total nitrogen was 22.9 mg/L at bore W029 (MZ 4) during the dry season. The maximum concentration for total phosphorous was 1.68 mg/L at bore HEA0126 (MZ 3), during the wet season.

However, nutrient levels were below historic maxima, with no trends evident over time. Seasonal conditions of wetting and drying may alter spatial and temporal patterns of groundwater flow, flux and quality, with implications for nutrient cycling in subterranean ecosystems (Tomlinson and Boulton 2010). There is relatively limited information on the response of nutrient changes to stygofauna communities.

Similar to 2019, a majority of metal concentrations across all bores and seasons were below detection (**Table 3-1, Table 3-2**), suggesting groundwaters may be characterised by naturally low mineralisation. The only parameters recorded in consistently detectable concentrations were barium, boron, manganese, molybdenum and zinc. Due to the high number of values below detection for metals, there is insufficient data for GTVs for the Program. While the number of values for barium, boron, manganese and molybdenum were considered adequate across both seasons, seasonal GTVs are still insufficient and were therefore not included in this report. Due to the very recent inclusion of metals, it is estimated that GTVs should be viable in the next few years of sampling.

While no GTVs are currently available for metals for each season, a comparison to relevant ANZECC & ARMCANZ (2000) trigger values (95% protection level in freshwater), indicated the following:

- most bores exceeded the trigger value for boron (0.37 mg/L) across monitoring zones and seasons;
- manganese, while present in detectable concentrations, was below the trigger value (1.9 mg/L), across monitoring zones and seasons, except for bore W201 (MZ 4) in the dry season (2.15 mg/L); and
- there were several instances where zinc exceeded the trigger value (0.008 mg/L) across monitoring zones and seasons.

These results suggest that groundwaters in the area are naturally enriched with boron and manganese and that there is no perceived metal toxicity risk to the Ethel Gorge stygofauna TEC.

Table 3-1: Groundwater quality during the November 2020 (dry season) survey of the Program.

Water Quality Parameter	LoR	Bore Hole - Dry Season																						min	max	2020 GTV												
		Monitoring Zone																																				
		1						IB			3			4						5		6					n	20th	80th	20% Var.	n	20th	80th	20% Var.				
Basic	pH (pH Unit) ^	0.01	7.99	8.24	7.96	8.15	7.93	7.99	8	7.95	7.97	8.07	7.94	8.55	7.89	8.35	8.05	8.15	8.02	8.41	8.09	7.94	8.2	8.25	4.95	7.86	7.97	4.95	8.6	73	7.2	8.0	-	154	7.2	8	-	
	Total Dissolved Solids (Lab)	10	992	1,000	3,300	1,170	818	930	1,340	1,130	988	1,690	1,260	696	755	722	1,360	576	490	1,110	2,490	1,400	1,130	1,090	840	1,340	794	490	3,300	38	857	1,326	1591	28	684	1242	1490	
	Electrical Conductivity ($\mu\text{S}/\text{cm}$)	1	1,620	1,640	5,200	1,740	1,270	1,470	2,240	1,590	1,560	2,710	2,030	999	1,200	1,200	2,070	925	830	1,790	4,150	2,140	1,740	1,710	1,260	1,840	1,300	830	5,200	70	-	3,727	4472	153	-	2675	3210	
	Suspended Solids (SS)	5	35	37	54	6	<5	27	59	<5	7	5	152	33	10	<5	<5	72	43	<5	20	<5	<5	<5	63	12	5	5	152	-	-	-	-	-	-	-	-	
Major Ions	Sodium	1	175	220	926	217	101	130	286	117	176	340	229	244	120	123	212	83	23	203	740	227	166	167	57	238	97	23	926	66	160	320	-	282	72.4	250	-	
	Magnesium	1	80	57	106	64	72	81	88	87	56	117	93	4	58	58	94	48	71	82	89	102	92	90	30	56	82	4	117	66	56	103	-	282	56	84.8	-	
	Potassium	1	6	7	24	6	6	10	6	6	8	8	6	9	8	7	6	4	6	20	5	4	4	1	9	6	1	24	66	6	10	-	282	5.32	12	-		
	Calcium	1	76	60	88	19	71	76	74	87	83	88	83	5	65	62	93	53	63	57	73	89	79	83	104	28	81	5	104	66	55	90	-	282	56	81	-	
	Chloride	1	232	282	984	561	216	189	420	321	283	573	367	72	186	168	448	138	36	403	928	432	320	296	442	600	144	36	984	66	260	573	-	281	150	429	-	
	Sulphate	1	201	180	769	<1	95	189	211	134	176	324	204	70	115	80	238	56	11	206	411	306	203	217	<1	1	130	1	769	66	155	290	-	281	83	240	-	
	Bicarbonate	1	376	320	567	70	305	360	424	289	318	341	405	340	272	322	255	255	430	171	424	248	270	296	<1	33	400	33	567	-	-	-	-	-	-	-	-	
	Hydroxide	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.0	0.0	-	-	-	-	-	-	-		
	Carbonate	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	8	24	-	-	-	-	-	-	-		
	Total Hardness as CaCO ₃	1	519	384	656	311	474	523	547	576	438	702	590	29	401	394	619	330	450	480	549	642	576	578	383	300	540	29	702	-	-	-	-	-	-	-	-	
	Total Alkalinity as CaCO ₃	1	376	320	567	70	305	360	424	289	318	341	405	364	272	332	255	255	430	180	424	248	270	296	<1	33	400	33	567	56	330	482	-	192	290	436.2	-	
	Total Anions	0.01	18.2	18.1	55.1	17.2	14.2	16.4	24.7	17.6	18	29.7	22.7	10.8	13.1	13	22.7	10.2	9.84	19.2	43.2	23.5	18.6	18.8	12.5	17.6	14.8	9.8	55.1	31	17.2	32.1	-	79	12.4	24.5	-	
	Total Cations	0.01	18.1	17.4	54	15.8	14	16.3	23.6	16.7	16.6	29	22	11.3	13.5	13.4	21.8	10.4	10.1	18.6	43.7	22.8	18.8	18.9	12.2	16.6	15.2	10.1	54	31	16.6	32.4	-	79	12.2	23.9	-	
	Ionic Balance	0.01	0.27	1.86	1	4.29	0.53	0.59	2.24	2.54	4.17	1.2	1.64	2.64	1.47	1.45	2.05	1	1.28	1.79	0.53	1.45	0.5	0.35	1.16	2.97	1.35	0.3	4.3	38	0.6	2.7	-	115	0.168	2.65	-	
Nutrients	Total Nitrogen	0.1	0.2	0.1	8.7	0.4	1.4	0.8	0.6	1.1	0.7	2.5	1.9	<0.1	3.7	4.1	1.8	<0.1	0.9	<0.1	12.8	8.2	14	9.1	0.2	2.7	0.8	0.1	14	85	0.9	1.9	-	309	0.59	2.34	-	
	Total Kjeldahl Nitrogen	0.1	0.1	0.1	1	0.4	0.2	0.1	0.2	0.2	0.3	0.4	1	<0.1	0.8	0.7	0.4	<0.1	0.2	<0.1	1.5	1.2	1.3	0.9	0.2	2.7	0.1	0.1	2.7	-	-	-	-	-	-	-	-	-
	Ammonia	0.01	<0.01	0.02	<0.01	0.46	0.03	0.02	<0.01	0.01	0.32	0.01	0.04	0.02	0.04	0.07	<0.01	0.03	0.03	0.04	0.26	0.01	0.01	0.02	2.91	<0.01	0.0	2.9	-	-	-	-	-	-	-	-		
	Nitrite + Nitrate	0.01	0.09	<0.01	7.68	<0.01	1																															

Table 3-2: Groundwater quality during the March 2021 (wet season) survey of the Program.

Water Quality Parameter	LoR	Bore Hole - Wet Season																						2021 GTV													
		Monitoring Zone																																			
		1					1B					3					4					5		6		min	max	n=	20th	80th	20%Var.	n=	20th	80th	20%Var.		
Basic	pH (pH Unit) ^	0.01	7.93	8.18	7.91	8.62	8.08	8.02	7.99	7.93	7.96	7.99	8.08	8.61	7.84	8.22	8.01	7.13	8.04	8.2	8.17	8.1	8.12	8.08	5.7	5.7	8.6	116	7.1	7.9	-	254	7.1	8	-		
	Total Dissolved Solids	10	932	1,910	3,270	766	812	872	1,490	874	918	1,620	1,300	706	940	874	1,600	431	512	2550	682	870	1,100	1,300	1,220	1,310	899	431	3270	53	748	1,400	1,680	53	753	1,380	1,656
	Electrical Conductivity ($\mu\text{S}/\text{cm}$)	1	1,450	1,560	5,090	1,420	1,260	1,280	2,180	1,370	1,480	2,590	2,080	1,060	1,470	1,240	2,290	599	852	4,290	1,020	1,300	1,730	1,890	1,350	1,860	1,310	599	5090	115	1,441	3,385	4,062	253	1,140	2,582	3,098
	Suspended Solids (SS)	5	43	80	9	<5	<5	6	274	<5	<5	13	108	20	<5	<5	<5	34	<5	<5	<5	7	6	<5	<5	6	274	-	-	-	-	-	-	-	-		
Major Ions	Sodium	1	154	217	889	241	91	89	278	104	171	303	224	248	138	121	235	52	21	769	94	150	153	172	64	239	94	21	889	69	102.4	336.8	-	240	89.8	278	-
	Magnesium	1	66	48	103	31	68	73	84	72	49	107	90	4	70	56	96	20	69	74	45	47	86	96	29	54	78	4	107	69	48.6	98.8	-	240	44	89.2	-
	Potassium	1	5	7	23	6	7	6	10	6	5	7	8	7	7	9	8	3	4	20	6	3	4	4	2	9	6	2	23	69	6.1	14.4	-	240	5.7	12	-
	Calcium	1	62	52	86	6	68	68	69	72	76	90	84	4	77	63	97	28	62	60	57	20	85	89	126	24	80	4	126	69	47	87.4	-	240	38.6	85	-
	Chloride	1	193	276	914	383	195	186	399	219	244	529	367	76	228	175	490	169	31	923	119	400	320	322	443	582	153	31	923	69	189	620	-	240	129.6	489.4	-
	Sulphate	1	155	129	732	12	88	120	175	109	164	273	186	65	138	83	241	<1	10	328	80	1	176	214	<1	<1	106	1	732	69	95.8	296.8	-	240	59.8	240	-
	Bicarbonate	1	362	286	536	152	312	308	461	318	272	342	403	350	380	330	262	60	476	370	239	70	263	299	1	35	394	1	536	-	-	-	-	-	-	-	
	Hydroxide	1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	0.0	0.0	-	-	-	-	-	-	-			
	Carbonate	1	<1	<1	<1	13	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	<1	13	28	-	-	-	-	-	-	-			
	Total Hardness as CaCO ₃	1	427	328	639	143	450	470	518	476	392	665	580	26	480	388	638	152	439	454	328	243	566	618	434	282	521	26	665	-	-	-	-	-	-		
	Total Alkalinity as CaCO ₃	1	362	286	536	165	312	308	461	318	272	342	403	378	380	330	262	60	476	370	239	70	263	299	1	35	394	1	536	63	310.0	450.0	-	209	253	420	-
	Total Anions	0.01	15.9	16.2	51.7	14.4	13.6	13.9	24.1	14.8	15.7	27.4	22.3	11	16.9	13.2	24.1	5.97	10.6	40.2	9.8	12.7	17.9	19.5	12.5	17.1	14.4	6	51.7	36	13.9	28.1	-	124	10.84	22.54	-
	Total Cations	0.01	15.4	16.2	52	13.5	13.1	13.4	22.7	14.2	15.4	26.6	21.5	11.5	15.8	13.2	23.2	5.38	9.79	43	10.8	11.5	18.1	19.9	11.5	16.3	14.6	5.4	52	36	13.5	27.9	-	124	10.72	21.44	-
	Ionic Balance	0.01	1.76	0.07	0.28	3.1	1.65	1.73	3	2.09	1.1	1.45	1.67	1.98	3.4	0.04	1.92	5.15	3.95	3.34	4.82	5.11	0.36	1.05	4.19	2.54	0.89	0.0	5	58	0.0	1.8	-	192	0	2.54	-
Nutrients	Total Nitrogen	0.1	0.4	0.3	8.2	0.3	2.1	0.4	0.5	1.1	0.2	2.4	1	<0.1	3.1	3.9	0.5	0.1	0.9	13.8	16.9	0.9	10.6	22.9	0.2	3.7	0.8	0.1	22.9	55	0.56	1.94	-	209	0.532	3.216	-
	Total Kjeldahl Nitrogen	0.1	0.2	0.2	1.1	0.3	0.7	<0.1	0.3	0.2	<0.1	0.7	0.2	<0.1	0.6	1.3	0.5	0.1	0.1	2.6	1.8	0.9	1.9	5.4	0.2	3.7	0.1	0.1	5.4	-	-	-	-	-	-	-	
	Ammonia	0.01	<0.01	0.02	0.02	0.2	0.36	0.01	0.11	<0.01	<0.01	0.24	<0.01	<0.01	0.06	0.13	0.23	0.04	<0.01	0.08	0.14	0.81	<0.01	<0.01	0.13	2.93	0.02	0.0	2.9	-	-	-	-	-	-		
	Nitrite + Nitrate	0.01	0.2	0.06	7.15	<0.01	1.36	0.36	0.21	0.93	0.21	1.67	0.81																								

Table 3-3: Means and ranges across seasons for the Program, in comparison to GTVs.

Water Quality Parameter			LoR	Dry							Wet						
				2020 Survey			GTVs				2021 Survey			GTVs			
				Min	Max	Mean	n=	20th	80th	20%Var	Min	Max	Mean	n=	20th	80th	20%Var
Basic	pH	All Zones	0.01	5.0	8.6	7.9	154	7.2	8	-	5.7	8.6	7.9	254	7.1	8	-
		MZ 1		7.9	8.2	8	73	7.2	8	-	7.9	8.6	8.1	116	7.1	7.9	-
	TDS	All Zones	10	490	3,300	1,176	63	684	1,242	1,490	431	3,270	1,174	78	753	1,380	1,656
		MZ 1		818	3300	1,329	24	857.0	1,326	1591.2	766	3,270	1,342	53	748	1,400	1,680
	EC	All Zones	1	830	5,200	1,849	153	-	2,675	3,210	599	5,090	1,760	253	1,140	2,582	3,098
		MZ 1		1,270	5,200	2,097	70	-	3,727	4472.4	1280	5,090	1,978	115	1,441	3,385	4,062
	Sodium	All Zones	1	23.0	926.0	224.7	282	72.4	250	-	21	889	212.4	240	89.8	278	-
		MZ 1		101	926	265.2	66	160	320	-	91	889	251	69	102.4	336.8	-
Ions	Magnesium	All Zones	1	4	117	74.3	282	56	84.8	-	4	107	64.6	240	44	89.2	-
		MZ 1		56	117	81.9	66	56	103	-	31	107	71.9	69	48.6	98.8	-
	Potassium	All Zones	1	1.0	24	7.52	282	5.32	12	-	2	23	7.28	240	5.7	12	-
		MZ 1		6	24	8.45	66	6	10	-	5	23	8.18	69	6.1	14.4	-
	Calcium	All Zones	1	5	104	69.6	282	56	81	-	4	126	64.2	240	38.6	85	-
		MZ 1		19	88	73.2	66	55	90	-	6	90	66.6	69	47	87.4	-
	Chloride	All Zones	1	36	984	361.6	281	150	429	-	31	923	333	240	130	489	-
		MZ 1		189	984	402.5	66	260	573	-	186	914	355	69	189	620	-
	Sulphate	All Zones	1	1	769	196.8	281	83	240	-	1	732	162.9	240	59.8	240	-
		MZ 1		1	769	248.3	66	155	290	-	12	732	194.8	69	95.8	297	-
	Total Alkalinity	All Zones	1	33	567	313	192	290	436	-	1	536	292	209	253	420	-
		MZ 1		70	567	343.2	56	330	482.0	-	165	536	342	63	310	450	-
	Total Anions	All Zones	0.01	9.8	55.1	20	79	12.4	24.5	-	6	51.7	18.23	124	10.8	22.5	-
		MZ 1		14.2	55.1	22.9	31	17.2	32.1	-	13.6	51.7	20.9	36	13.9	28.1	-
	Total Cations	All Zones	0.01	10.1	54.0	20.7	79	19.6	23.9	-	5.4	52.0	17.9	124	10.7	21.4	-
		MZ 1		14.0	54.0	20.8	31	22.1	32.4	-	13.1	52.0	20.3	36	13.5	27.9	-
	Ionic Balance	All Zones	0.01	0.3	4.3	1.61	115	0.17	2.65	-	0.07	5.0	2.26	192	0	2.54	-
		MZ 1		0.3	4.3	1.84	38	0.6	2.7	-	0.07	3	1.62	58	0.0	1.8	-
Nutrients	Total Nitrogen	All Zones	0.1	0.1	14	3.48	309	0.59	2.34	-	0.1	23	3.96	209	0.53	3.22	-
		MZ 1		0.1	8.7	1.67	85	0.9	1.9	-	0.3	8.2	1.53	55	0.6	1.9	-
	Nitrite + Nitrate	All Zones	0.01	0.0	12.7	3.29	115	0.13	7.88	-	0.005	17.5	3.27	193	0.10	7.5	-
		MZ 1		0.005	7.68	1.59	66	0.3	6.5	-	0.005	7.15	1.29	65	0.38	7.98	-
	Total Phosphorus	All Zones	0.01	0.0	1.7	0.23	79	0.02	0.09	-	0.01	0.4	0.062	110	0.01	0.112	-
		MZ 1		0.005	0.04	0.034	31	0.02	0.06	-	0.01	0.12	0.044	39	0.02	0.086	-

Note: All units in mg/L unless otherwise stated; n=number of data records; yellow shading indicates value exceeds 20th percentile of dry season GTV; red shading indicates value exceeds 80th percentile of dry season GTV; bold font indicates exceedance of EPWMRP (2014) 20% variance GTV.

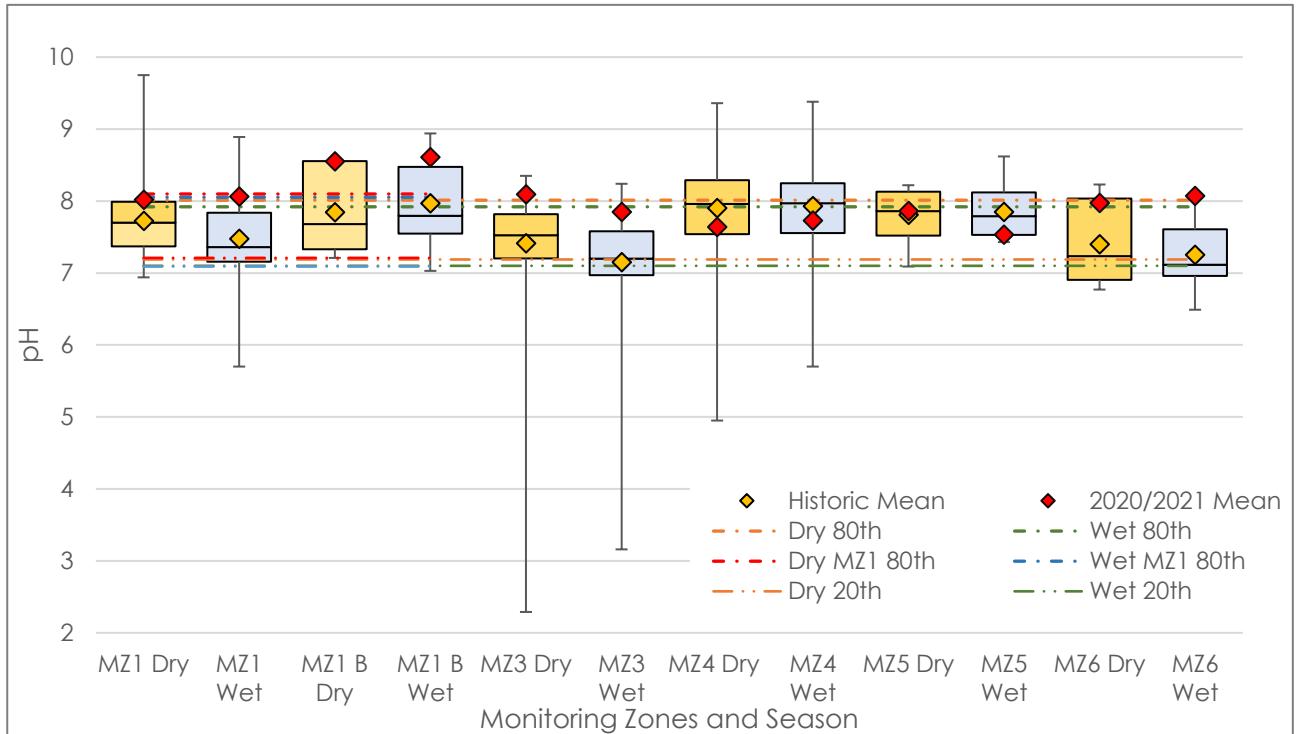


Figure 3-2: Comparison of pH for each monitoring zone and across dry and wet seasons (2009 to 2021), compared to the GTVs and seasonal means.

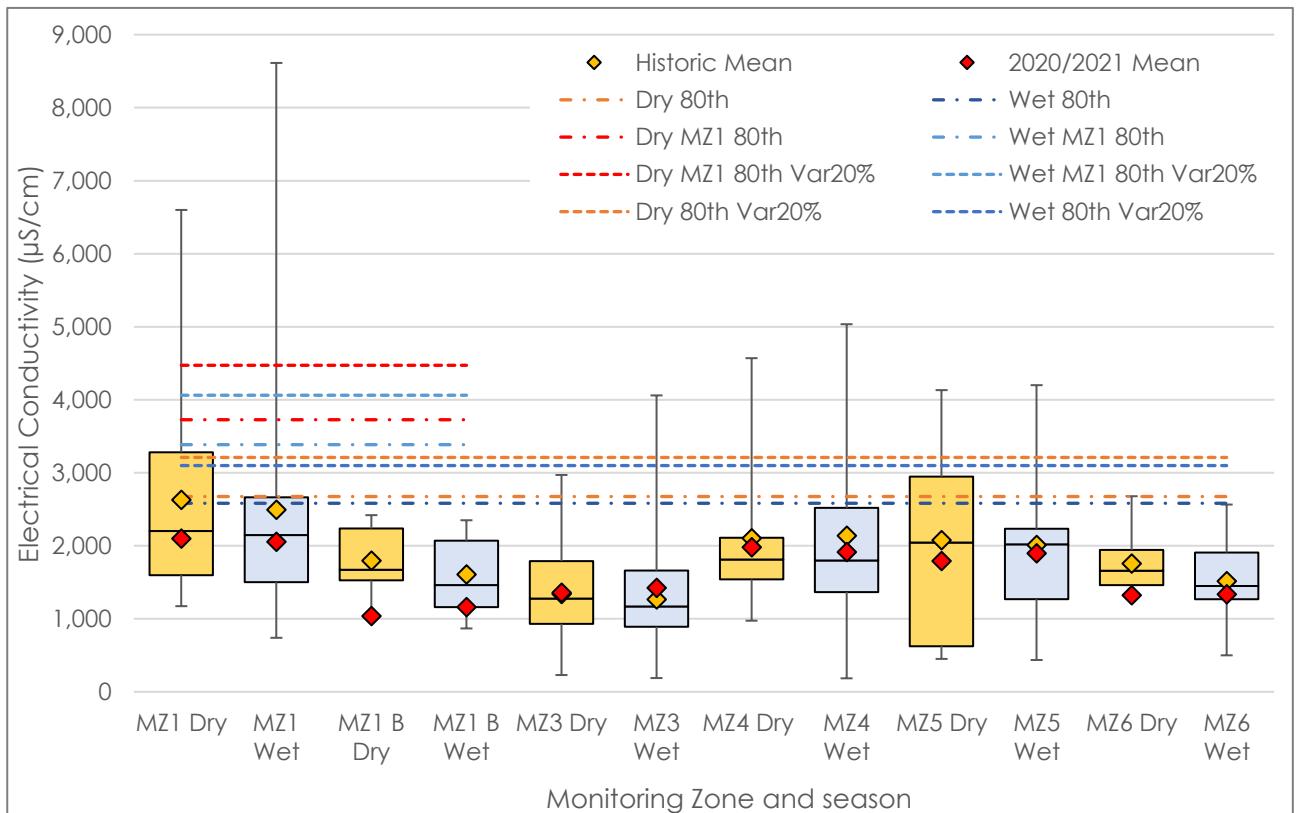


Figure 3-3: Comparison of salinity (EC) for each monitoring zone and across dry and wet seasons (2009 to 2021), compared to the GTVs and seasonal means.

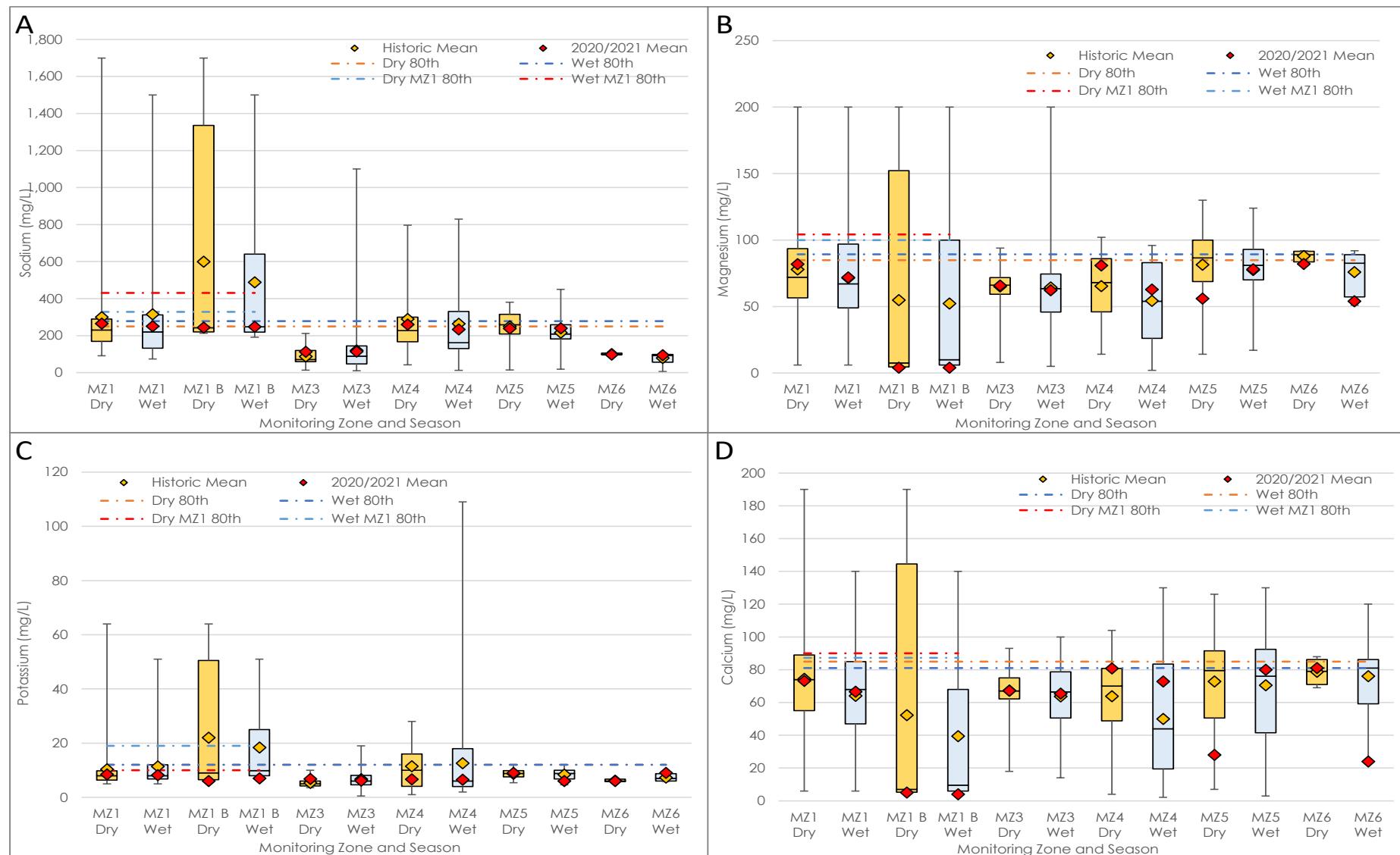


Figure 3-4: Comparison of major ions for each monitoring zone and across dry and wet seasons, compared to the GTVs and seasonal means (2012 to 2021) (A) sodium, (B)magnesium, (C)potassium, and (D) calcium.

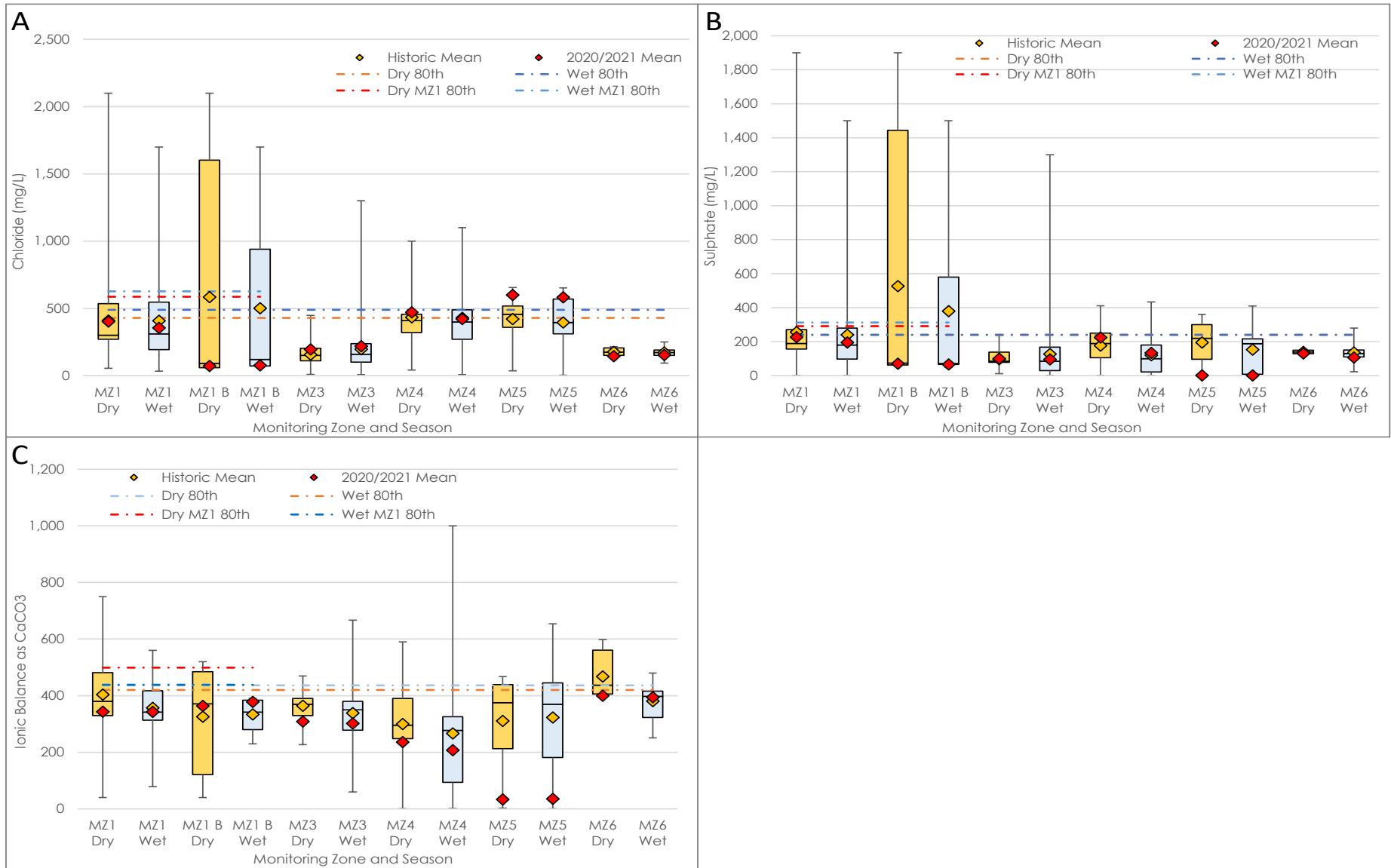


Figure 3-5: Comparison of major ions for each monitoring zone and across dry and wet seasons, compared to the GTVs and seasonal means (2012 to 2021), (A) chloride, (B)sulphate, and (C)alkalinity.

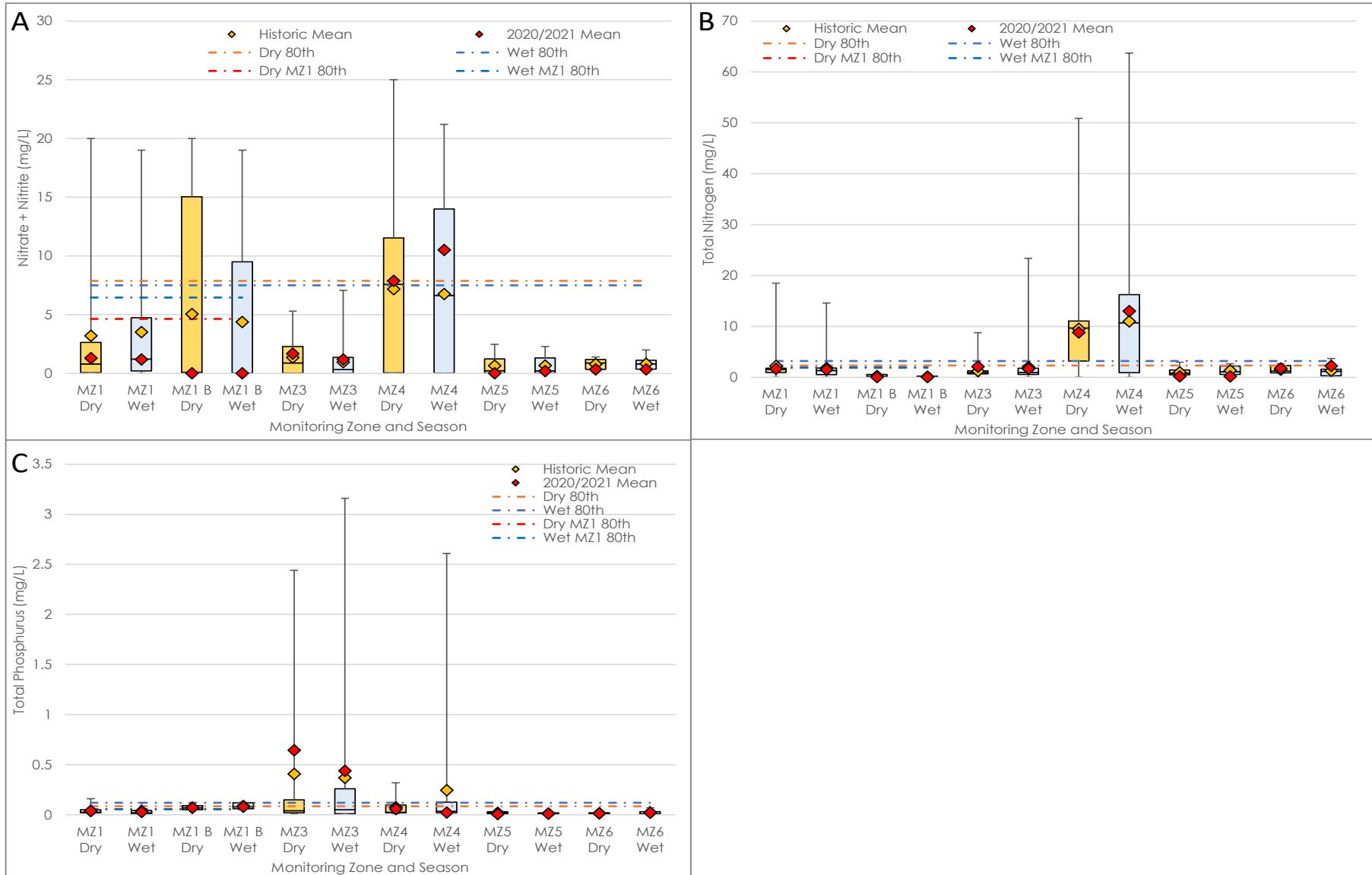


Figure 3-6: Comparison of nutrients for each monitoring zone and across dry and wet seasons, compared to the GTVs and seasonal means (2012 to 2021), (A) nitrate + nitrite, (B) total nitrogen, and (C) total phosphorus.

3.2 Stygofauna Results

3.2.1 Overview

A total of 26 stygofauna species were recorded across the two monitoring rounds of the Program, representing six higher level taxonomic groups; Amphipoda, Bathynellacea, Copepoda, Isopoda, Ostracoda and Oligochaeta (**Table 3-4**, **Table 3-5**, **Table 3-6**, **Figure 3-7**).

Of these, 13 core taxa were identified. Over 130 specimens were recorded during the dry season, from five higher level taxonomic groups and 18 taxa, incorporating nine core taxa (**Table 3-4**). Stygal abundance increased during the wet season, with 689 specimens recorded across five higher level taxonomic groups (**Table 3-5**). Nineteen taxa were represented, including eight core taxa. Stygofauna abundance during the dry season was comparable to the 2020 monitoring round while the wet season yielded higher numbers than the 2017 and 2020 monitoring rounds (Stantec 2017;2020a).

Stygofauna were recorded from 12 of the 25 bores sampled during the dry season (**Figure 3-8**), representing a slightly lower proportion of bores than the previous season. The majority of bores sampled (11) were in MZ 1, corresponding with the core stygofauna habitat. Of these, eight bores yielded stygofauna, with stygofauna also documented from bores in MZ 3 and MZ 4. Sampling in the remaining monitoring zones (MZ 1B, MZ 5 and MZ 6) was limited to a single bore in each zone, which did not yield stygofauna.

During the wet season, stygofauna were collected from 18 of the 25 bores (**Figure 3-8**); proportionately higher than the previous wet season, although lower than previous monitoring rounds (Stantec 2017). The 11 bores sampled in MZ 1 were all found to contain stygofauna, attributed to favourable conditions (greater infiltration of organic matter) following rain (Sacco et al. 2021). Stygofauna were also recorded from several bores in MZ 3 and MZ 4 (**Table 3-5**). Consistent with the dry season, the bores sampled in MZ 5 and MZ 6 did not yield stygofauna. In comparison, a single taxon was recorded from the bore in MZ 1B (**Table 3-5**).

3.2.2 Taxa

3.2.2.1 Amphipoda

Amphipoda was represented by eight taxa comprising four core taxa and four taxa that were either indeterminate or likely to belong to one of the core taxa identified during the Program (**Table 3-6**). Records were primarily concentrated in MZ 1, corresponding with the core habitat (**Figure 3-9**). In line with previous monitoring rounds (**Appendix F**), the majority of amphipods belonged to the core taxon *Chydaekata acuminata* (**Plate 3-1**). This taxon was well distributed in MZ 1, represented by fourteen specimens from six bores during the dry season and 78 specimens from seven bores in the wet season. It was also documented from two bores in MZ 4 (W028 and W029) and a single bore (HEA0133) in MZ 3. Although primarily concentrated in MZ 1, the distribution of *Chydaekata acuminata* has also been shown to extend to MZ 5 during previous monitoring rounds (**Appendix H**).

Five of the *Chydaekata acuminata* specimens collected during the Program were confirmed/identified genetically. Each belonged to haplotype 1, consistent with previously sequenced specimens from the same bores (Leijs 2021) (**Appendix I**). A second core amphipod taxon, *Chydaekata* sp. OB1_AMP005, was recorded from MZ 1 bore T399 during the dry season and MZ 4 bore W029 in the wet season (**Table 3-4**, **Table 3-5**). While this taxon has been previously recorded from the area (MWH 2015), sequencing of the W029 specimen revealed an additional haplotype (3) (Leijs 2021) (**Appendix I**).

The other core amphipod taxa recorded during the Program were Paramelitidae OB2 AMP002 and *Maarrka etheli* (**Table 3-6**). Paramelitidae OB2 AMP002 was represented by three specimens from MZ 1 bore W152. Sequencing identified an additional haplotype (6) for the taxon, adding to the five haplotypes already recognised from the area (**Appendix I**). *Maarka etheli* was documented in low numbers from MZ 1 across both seasons. This taxon, which was formerly described in 2011 (Finston et al. 2011) has been recorded during numerous monitoring rounds, albeit in limited abundance (**Appendix F**).

3.2.2.2 Bathynellacea

A total of 22 bathynellacean specimens were recorded during the Program, all belonging to the family Bathynellidae (**Table 3-6**). This abundance represents an increase compared to recent monitoring rounds which either failed to yield bathynellaceans (2019/2020) or collected low numbers (2017) (**Appendix F**). During the Program, all specimens were recorded in the wet season (**Table 3-5**). The majority (20) were from a single bore in MZ 4 (**Figure 3-10**) and were morphologically identified as *Pilbaranella ethelensis* (**Plate 3-1**) which has been previously described from the Ethel Gorge area based on morphological and genetic data. (Perina et al. 2018). Up to four additional lineages of *Pilbaranella* (A, B, C and potentially D) were also identified from the area during this study, some of which were found to co-occur with *Pilbaranella ethelensis*.

The remaining two specimens for the Program were indeterminate *Pilbaranella* from MZ 3 site HEOP126 (**Table 3-5**). The specimens were considered likely to belong to *Pilbaranella* sp. B), based on previous records from this site (Perina et al. 2018).

To provide additional insight into the relationship between bathynellids in the area, the sequences of several specimens from earlier monitoring rounds were compared to sequences of *Pilbaranella ethelensis* assigned by Perina et al. (2018). The investigation indicated that the specimens, (formerly Bathynellidae OB1), aligned with the *Pilbaranella ethelensis* group (**Figure 3-11**) and were subsequently assigned to *Pilbaranella ethelensis*. It was noted in Perina et al (2018) that certain genetic markers/methods split *Pilbaranella ethelensis* into more than one lineage. This was supported by the pairwise sequence divergence between clades A and B of the *ethelensis* group (**Figure 3-11**). However, based on genetic, morphological and hydrogeological lines of evidence (Perina et al. 2018) adopted a more conservative approach to the delineation of *Pilbaranella ethelensis*, which has been followed for this Program.

Pilbaranella sp. B was also identified genetically from material collected during earlier monitoring rounds (**Figure 3-11**). The lineage was confirmed from a specimen (formerly Bathynellidae OB2) collected at MZ 1 site HEOP0574M (W262) in 2012. *Pilbaranella* sp. B has also been documented from several other bores in the area, existing sympatrically with *Pilbaranella* sp. A and *Pilbaranella ethelensis* (Perina et al. 2018).

Pilbaranella ethelensis, *Pilbaranella* sp. B. and *Pilbaranella* sp. have been added to the list of core species, based on their current distribution. Further work on bathynellids from the area would likely result in additional changes to the core species list (**Appendix F**).

3.2.2.3 Copepoda

A total of seven copepod taxa were recorded during the Program including three described cyclopoid species, one described harpacticoid species and three indeterminate species. Consistent with previous monitoring rounds (MWH 2016a; Stantec 2020a; Subterranean Ecology 2014), cyclopoid copepods were the most abundant and widespread stygal group (**Appendix H, Figure 3-12, Figure 3-13**). *Diacyclops humphreysi* dominated the copepod assemblage, with more than 500 specimens recorded across the two seasons (**Table 3-6**). This species, which occurs widely within the Ethel Gorge area, is one of the most wide ranging copepods in groundwaters of the Pilbara region (Halse et al. 2014).

Diacyclops cockingi was recorded in low numbers from MZ 1 bores T399 and HEOP0574M during the Program, both of which have yielded this species during previous monitoring rounds (**Appendix F**). *Pilbaracyclops supersensus* was the only core copepod taxon recorded during the Program, corresponding with recent monitoring rounds (Stantec 2017;2020a). It was collected in limited abundance (three specimens) from MZ 1 site HEOP0388, with similar numbers documented from this bore during multiple monitoring rounds. This species has also been recorded from several other MZ 1 bores historically, also in low frequencies (**Appendix F**).

Harpacticoids were represented by *Archinitocrella newmanensis* and an indeterminate ameirid. The former was collected as a single specimen from MZ 4 bore W028 during the dry season, while six specimens were documented across MZ 3 and MZ 4 bores during the wet season (**Table 3-4, Table 3-5, Figure 3-14**). This taxon has been recorded across the majority of monitoring rounds, in variable frequencies and is known to occur more widely in the Pilbara region (Karanovic 2006). The total abundance of copepods during the wet season represented an increase from recent monitoring rounds (Stantec 2017;2020a). However, the values remained comparatively less than previous sampling (MWH 2015; Subterranean Ecology 2014).

3.2.2.4 Isopoda

A single isopod taxon, the core species *Pygolabis humphreysi*, was documented during the Program (**Table 3-6, Plate 3-1**). During the dry season, the species was represented by four specimens across three MZ 1 bores, while the wet season yielded three specimens from MZ 1 bores (**Figure 3-15**). *Pygolabis humphreysi* has been consistently recorded from the area over time, with a distribution ranging from north of the Ethel Gorge core habitat to the Fortescue River (MZ 4), Whaleback Creek (MZ 6) and Homestead Creek (MZ 3) catchments to the south and west (**Appendix H**). The limited numbers recorded during this Program reflect the general pattern of abundance for this species in recent monitoring rounds (Stantec 2017;2020a).

3.2.2.5 Ostracoda

Five ostracod taxa of the family Candonidae were recorded during the Program, primarily in association with the core habitat or periphery (**Figure 3-16**). This included four described species and one recognised morphospecies (**Table 3-4, Table 3-5**). Of these, three were designated as core taxa; *Pilbaracandona eberhardi*, *Pilbaracandona kosmos* and the newly added *Origocandona* 'BOS09'. The latter was collected from MZ 1 bore HEOP0417 and MZ 4 bores W028 and W029 during the Program (**Table 3-5**). While these records are the first from the ongoing monitoring program, this taxon has been recorded from the Ethel Gorge and Jimblebar areas during previous studies and is considered to be localised (Bennelongia 2013).

Pilbaracandona eberhardi (**Plate 3-1**) was recorded from two bores in MZ 1 during the wet season (15 specimens). This species has been collected during each year of sampling from 2008 onwards and represents the most commonly recorded ostracod in the area. The other core ostracod, *Pilbaracandona kosmos*, was reported from MZ 1 bore T399 during the dry season and has also been recorded across multiple monitoring rounds (**Appendix F**).

Of the remaining ostracods, *Origocandona inanitas* was recorded as a singleton from MZ 1, while *Pilbaracandona colonia* was collected across both seasons of the Program, totalling 42 specimens (**Table 3-6**). These species have been recorded from the Ethel Gorge area during numerous monitoring rounds and are known to occur more broadly in the Pilbara region (Bennelongia 2013).

3.2.2.6 Oligochaeta

Oligochaetes have been widely recorded from the broader Ethel Gorge area over time (**Appendix H**). This Program yielded two taxa; Phreodrilidae sp. and the core taxon Phreodrilidae sp. OB2_sp. 4 (OP2). These taxa were recorded from MZ 1 bores W117 and W152 during the dry season, with abundances of one and nine specimens, respectively (**Table 3-4, Figure 3-17**). Genetic analyses of two representative specimens also confirmed that the taxa were consistent with species already known from the area. However, the haplotypes for both specimens, haplotype 2 for Phreodrilidae sp. and haplotype 4 for Phreodrilidae sp. OB2_sp. 4 (OP2), had not been previously recorded (Leijs 2021) (**Appendix I**).

3.2.2.7 Summary

The overall abundance of the stygofauna recorded during the wet season of the Program, was higher than recent monitoring rounds (Stantec 2017;2020a), attributed to above average rainfall in several months prior to the wet season sampling (**Figure 1-2**). While numbers during the wet season were still less than previous sampling undertaken between 2010 and 2016 (MWH 2015;2016a; Subterranean Ecology 2012a;2014), the increased abundance relative to the 2017 and 2020 wet seasons highlighted the potential for the stygofauna population to respond and recolonise during favourable conditions associated with greater infiltration of organic matter (Sacco et al. 2021).

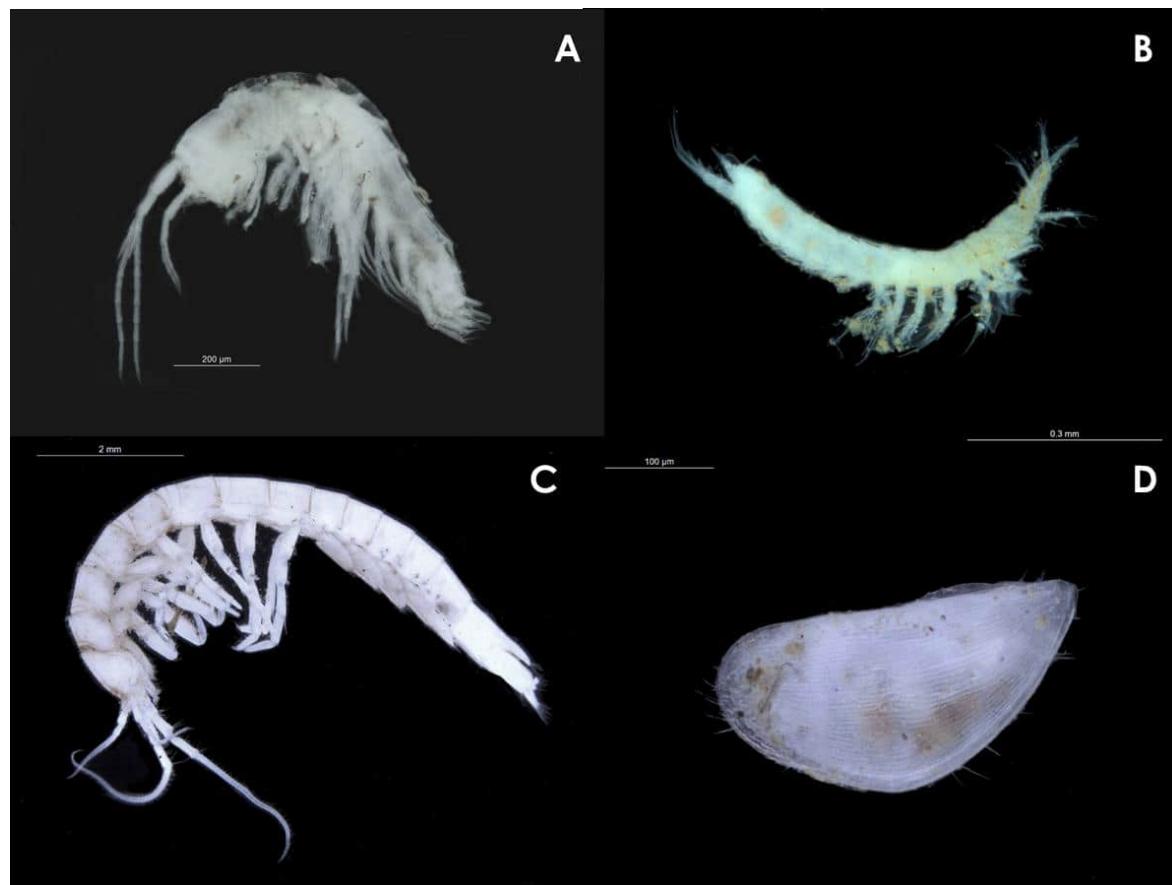


Plate 3-1: Examples of stygofauna recorded during the Program A) *Chydaekata acuminata* B) *Pilbaranella ethelensis* C) *Pygolabis humphreysi* D) *Pilbaracandona eberhardi*.

Table 3-4: Stygofauna diversity recorded during the dry season.

Taxon	Bore - Dry Season											
	MZ 1								MZ 3		MZ 4	
	HEOP0388	HEOP0425	HEOP0574M	T399	W056	W116	W117	W152	HEA0121	HEA0133	W028	W029
Amphipoda												
Amphipoda indet.								2			2	
<u>Paramelitidae</u>												
Chydaekata ? acuminata					1							
Chydaekata acuminata ^{DNA}	2	1		1		6	1	3			1	1
Chydaekata sp. OB1_AMP005				1								
Paramelitidae indet.			6				11					
Paramelitidae OB2 AMP002 ^{DNA}								3				
Maarrka ? etheli			1								1	
Maarrka etheli	1											
Copepoda												
<u>Cyclopoida</u>												
<u>Cyclopidae</u>												
Diacyclops cockingi				1								
Diacyclops humphreysi s.l.				2							20	40
Harpacticoida												
<u>Ameiridae</u>												
Archinitocrella newmanensis											1	
Isopoda												
<u>Tainisopidae</u>												
Pygolabis humphreysi	1			2							1	
Oligochaeta												
<u>Naididae</u>												
Pristina sp. OB									1			
<u>Phreodrilidae</u>												
Phreodrilidae sp. DNA							12					
Phreodrilidae sp. 4 (OP2) sp. OB2 ^{DNA}								9				
Ostracoda												
<u>Candonidae</u>												
Pilbaracandona colonia			1								4	
Pilbaracandona kosmos				3								
Origocandona 'BOS099'											2	

Note: Orange highlighted cells denote 'core species' considered endemic to Ethel Gorge and the Newman area (Bennelongia 2013). DNA indicates identification of some specimens determined/confirmed by DNA analysis using CO1 sequence data (Leijss 2021) (Appendix I).

Table 3-5: Stygofauna diversity recorded during the wet season.

Taxa	Bores – wet season																	
	MZ 1											MZ 1B	MZ 3			MZ 4		
	HEOP0388	HEOP0417	HEOP0425	HEOP0504M	HEOP0574M	OB23REG1	T399	W056	W116	W117	W152	EEX931	HEA0121	HEA0126	HEA0133	HEOP0398M	W028	W029
Amphipoda																		
Amphipoda indet.									1									
<u>Paramelitidae</u>																		
<i>Chydaekata acuminata</i> DNA			1			22		2	7	2	26	18			1		1	6
<i>Chydaekata</i> sp. OB1_AMP005 DNA																		1
Paramelitidae indet.	2					17				2		4						
<i>Maarrka etheli</i>						2												
Bathynellacea																		
<u>Bathynellidae</u>																		
<i>Pilbaranella ethelensis</i>																20		
<i>Pilbaranella</i> sp.														2				
Copepoda																		
<u>Cyclopoida</u>																		
<u>Cyclopidae</u>																		
<i>Diacyclops cockingi</i>						2												
<i>Diacyclops humphreysi</i> s.l.	12		2	10	9	120		80	1	15			3	5	16	2	85	115
<i>Diacyclops</i> sp.													1				2	
<i>Dussartcycllops</i> sp.																		
<i>Pilbaracyclops supersensus</i>	3																	
<u>Harpacticoida</u>																		
<u>Ameiridae</u>																		
<i>Ameiridae</i> sp.								1										
<i>Archinitocrella newmanensis</i>															4		2	
Isopoda																		
<u>Tainisopidae</u>																		
<i>Pygolabis humphreysi</i>	1							1			1							
Ostracoda																		
<u>Candonidae</u>																		
<i>Origocandona 'BOS099'</i>		1															2	3
<i>Origocandona inanitas</i>	1		1				34		2									
<i>Pilbaracandona colonia</i>																		
<i>Pilbaracandona eberhardi</i>							1				14							

Note: Orange highlighted cells denote 'core species' considered endemic to Ethel Gorge and the Newman area (Bennelongia 2013). DNA indicates identification of some specimens determined/confirmed by DNA analysis using CO1 sequence data (Leijis 2021) (Appendix I).

Table 3-6: Stygofauna abundance recorded during the Program with distribution relative to the TEC boundaries and core habitat (2003 to May 2021).

Taxa	2019/2020 Program				2003 to May 2021 Records			
	Total Abundance Dry Season	Monitoring Zone	Total Abundance Wet Season	Monitoring Zone	Within TEC Boundary	Within TEC Buffer	Outside TEC Buffer	Within Core Habitat
Amphipoda								
Amphipoda indet.	4	1,4	1	1	•	•	•	•
<u>Paramelitidae</u>								
<i>Chydaekata</i> ? <i>acuminata</i>	1	1			•	•		•
<i>Chydaekata acuminata</i> DNA	16	1,4	86	1,3,4	•	•	•	•
<i>Chydaekata</i> sp. OB1_AMP005 DNA	1	1	1	4	•	•		•
Paramelitidae indet.	17	1	25	1	•	•	•	•
Paramelitidae OB2_AMP002 DNA	3	1			•	•	•	•
<i>Maarrka</i> ? <i>etheli</i>	2	1,3			•	•		•
<i>Maarrka etheli</i>	1	1	2	1	•	•		•
Bathynellacea								
<u>Bathynellidae</u>								
<i>Pilbaranella ethelensis</i>			20	4	•	•		•
<i>Pilbaranella</i> sp.			2	3				
Copepoda								
<u>Cyclopoida</u>								
<u>Cyclopidae</u>								
<i>Diacyclops cockingi</i>	1	1	2	1	•	•		•
<i>Diacyclops humphreysi</i> s.l.	62	1,4	475	1,3,4	•	•	•	•
<i>Diacyclops</i> sp.			2	4	•	•		•
<i>Dussartcyclops</i> sp.			1	1B	•	•		•
<i>Pilbaracyclops supersensus</i>			3	1	•	•		•
<u>Harpacticoida</u>								
<u>Ameiridae</u>								
<i>Archinitocrella newmanensis</i>	1	4	6	3,4	•	•	•	•
<i>Ameiridae</i> sp.			1	1	•	•		•
Isopoda								
<u>Tainisopidae</u>								
<i>Pygolabis humphreysi</i>	4	1,3	3	1	•	•	•	•
Oligochaeta								
<u>Naididae</u>								
<i>Pristina</i> sp. OB	1	3			•	•		•
<u>Phreodrilidae</u>								
Phreodrilidae sp. DNA	1	1					•	•
<i>Phreodrilidae</i> sp. OB2_sp. 4 (OP2) DNA	9	1			•	•		•
Ostracoda								
<u>Candonidae</u>								
<i>Pilbaracandona colonia</i>	5	1,4	37	1	•	•	•	•
<i>Pilbaracandona eberhardi</i>			15	1	•	•	•	•
<i>Pilbaracandona kosmos</i>	3	1			•	•	•	•
<i>Origocandona</i> `BOS099`	2	4	6	1,4	•	•		•
<i>Origocandona inanitas</i>			1	1	•	•	•	•

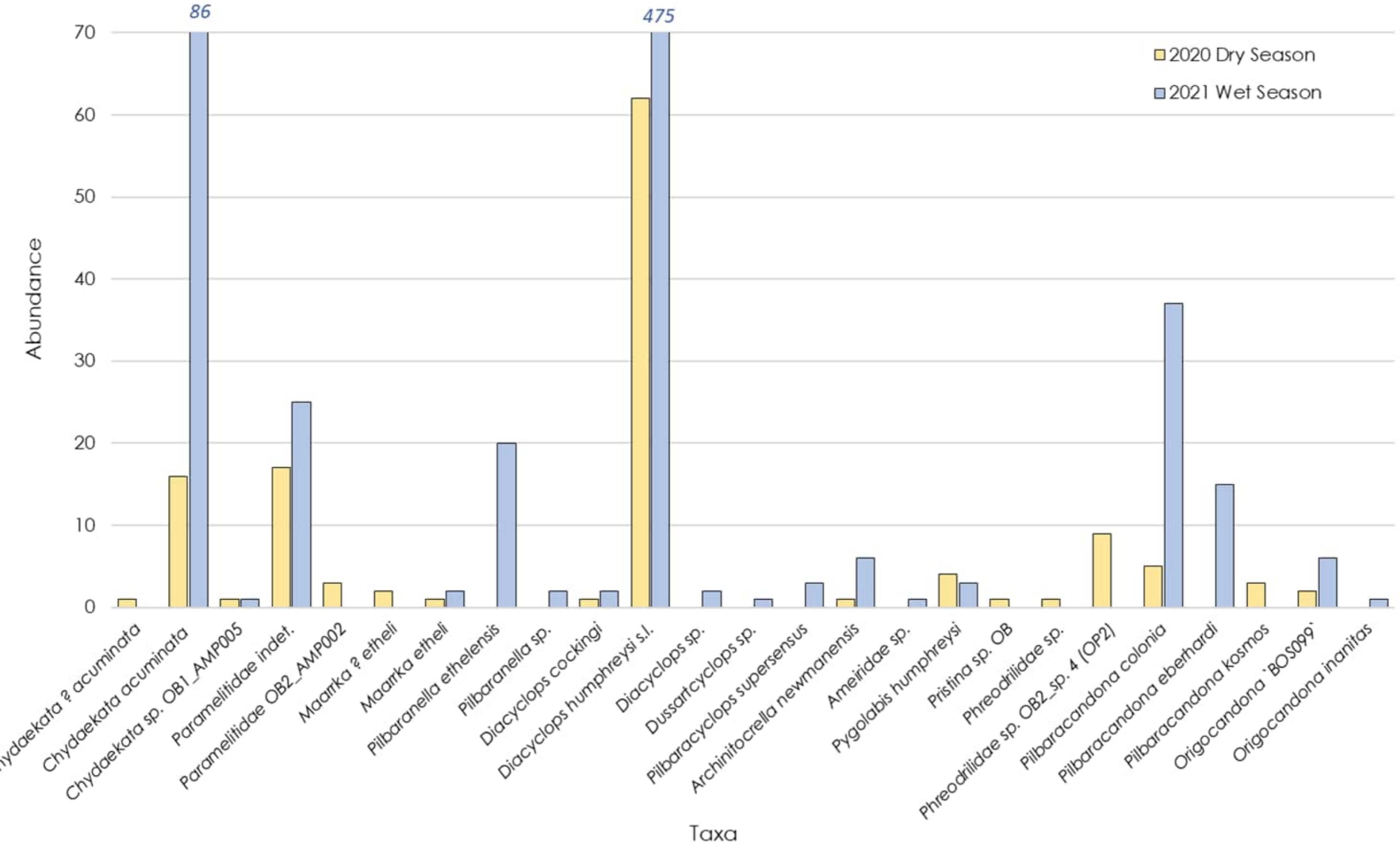
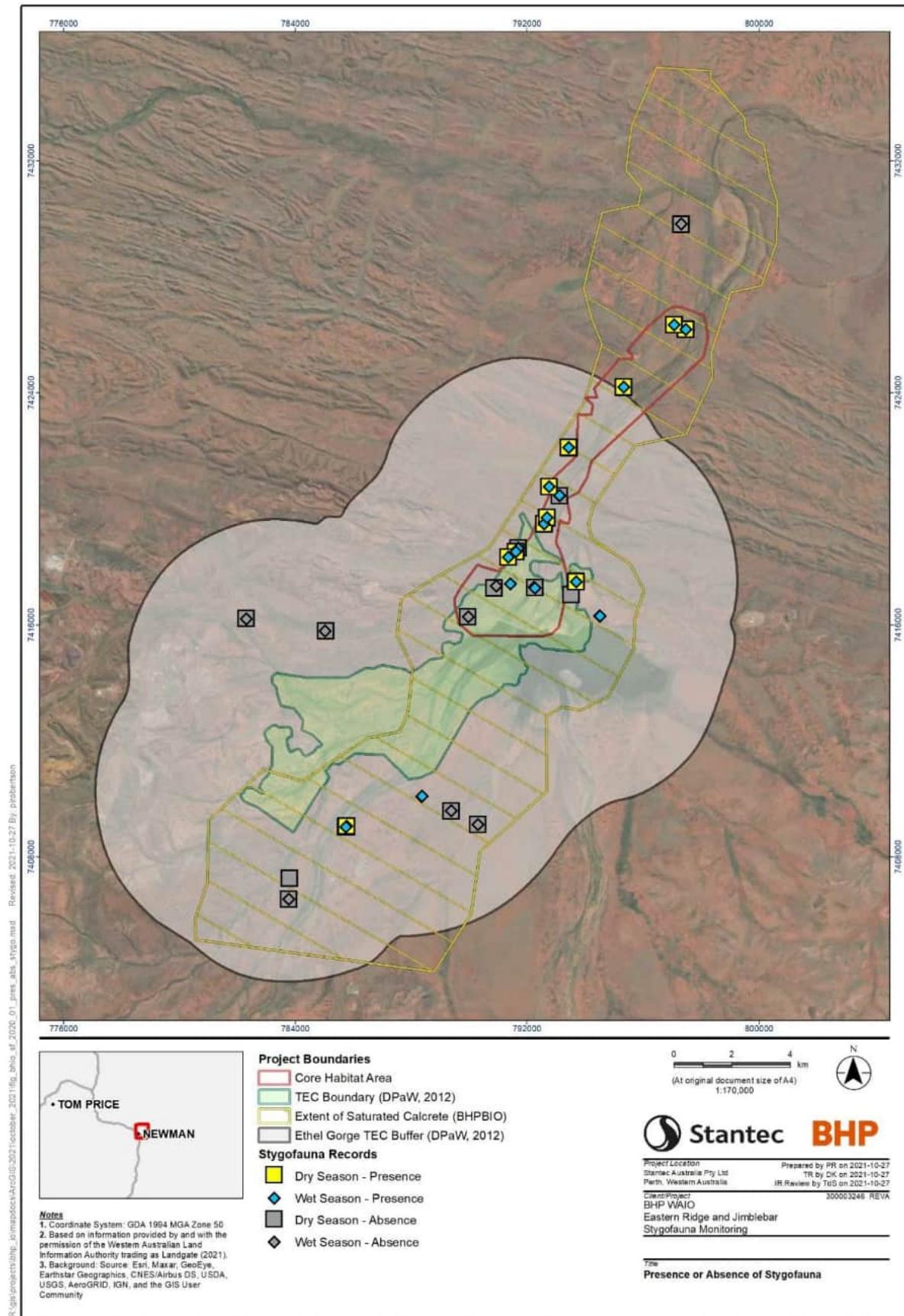


Figure 3-7: Abundance of taxa recorded from the dry and wet seasons.



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Figure 3-8: Presence or absence of stygofauna during the Program.

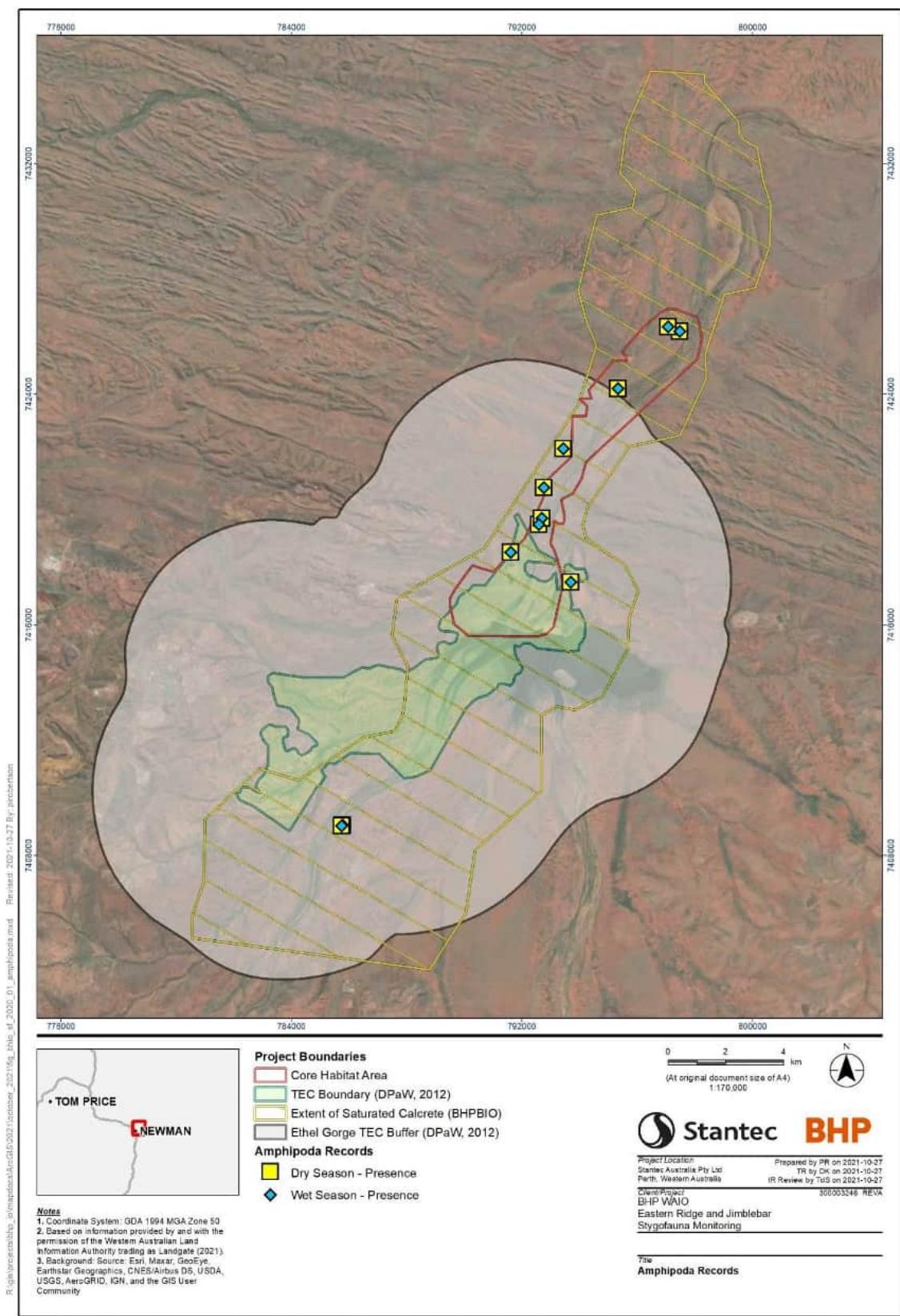
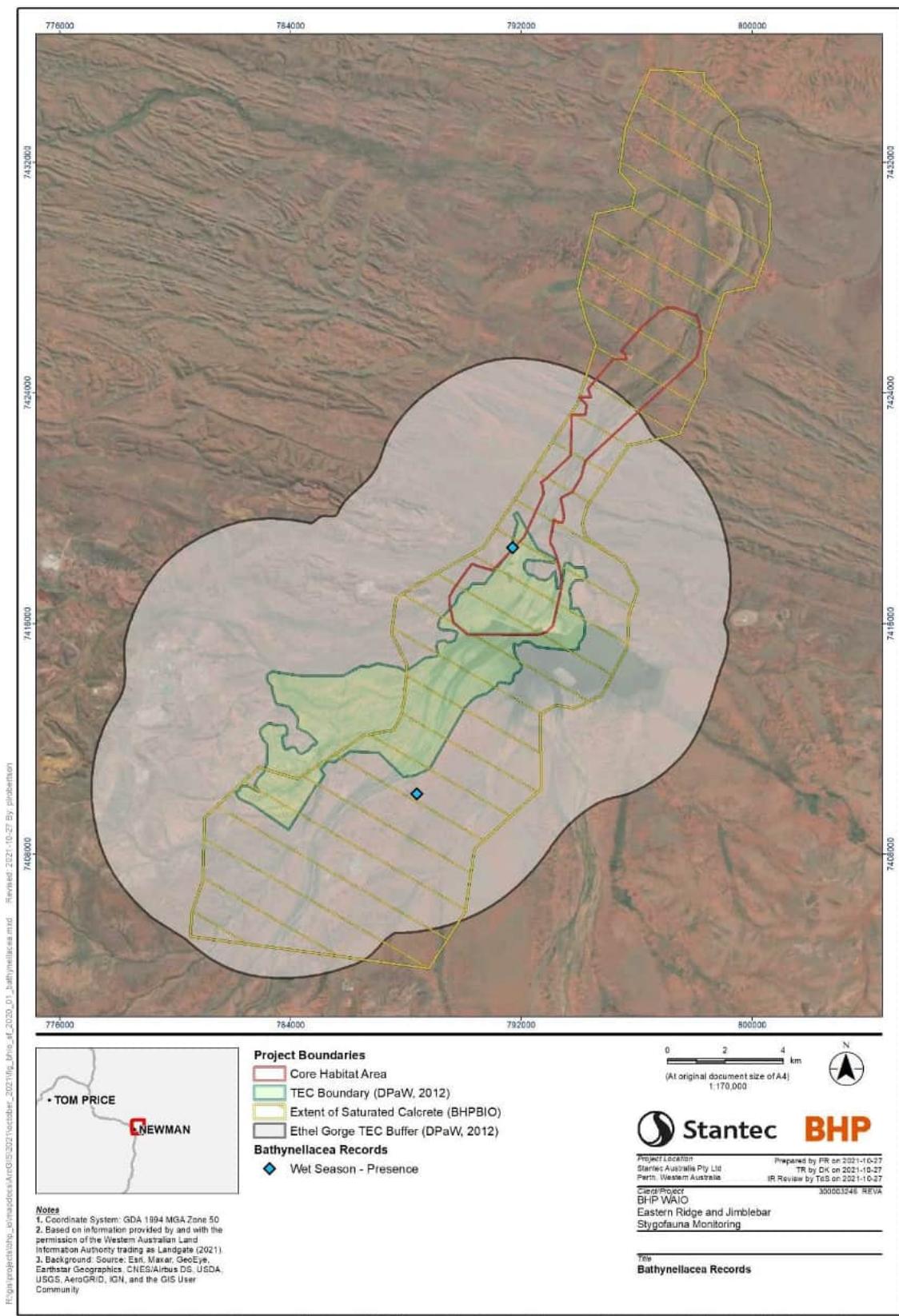


Figure 3-9: The distribution of Amphipoda during the Program.



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Figure 3-10: The distribution of Bathynellacea during the Program.

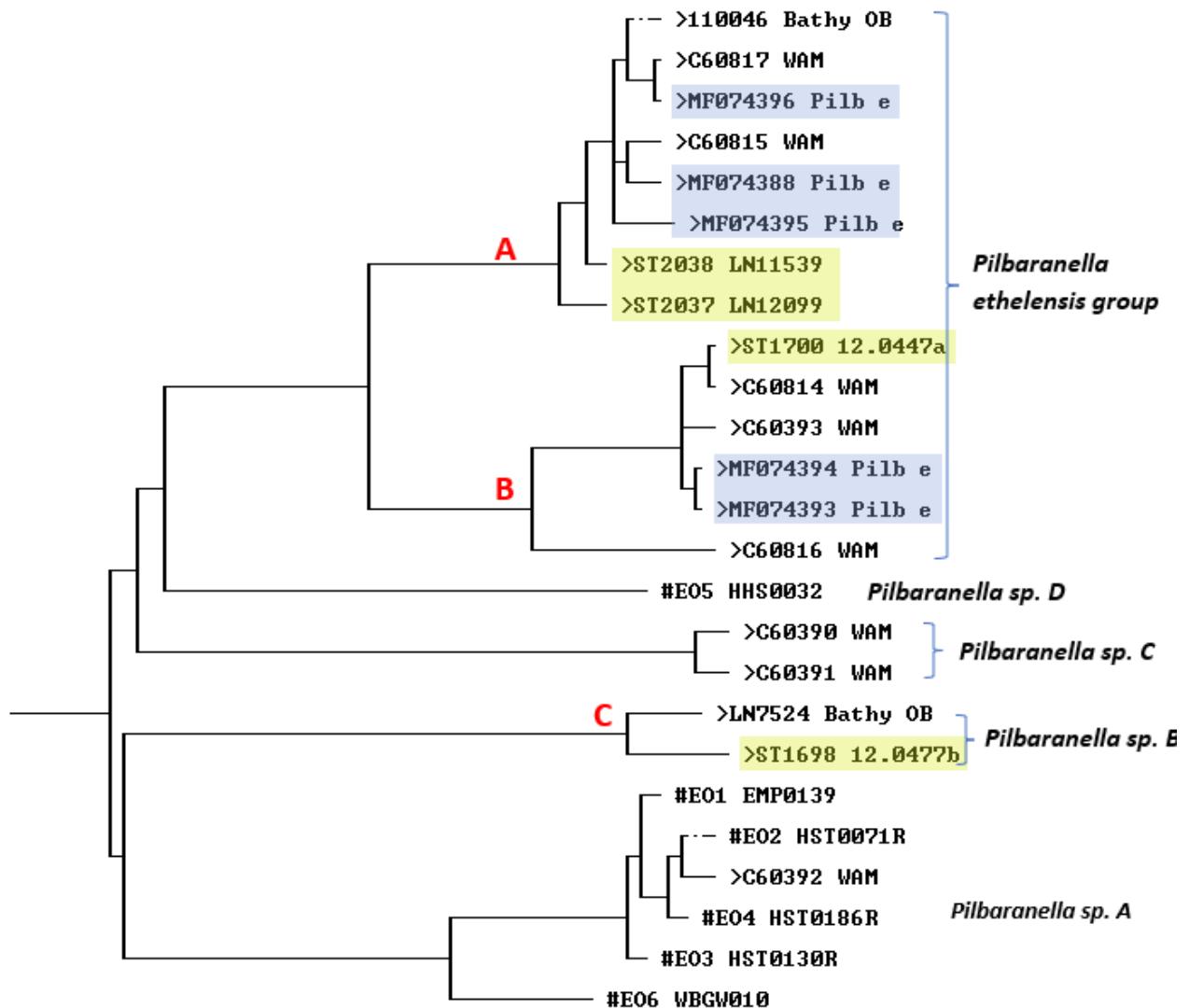


Figure 3-11: Partial cladogram of Bathynellidae. Yellow highlight indicates sequences from representative 2012 and 2017 specimens collected in 2012 and 2017 as part of the ongoing monitoring program (prepared by R. Leijss).

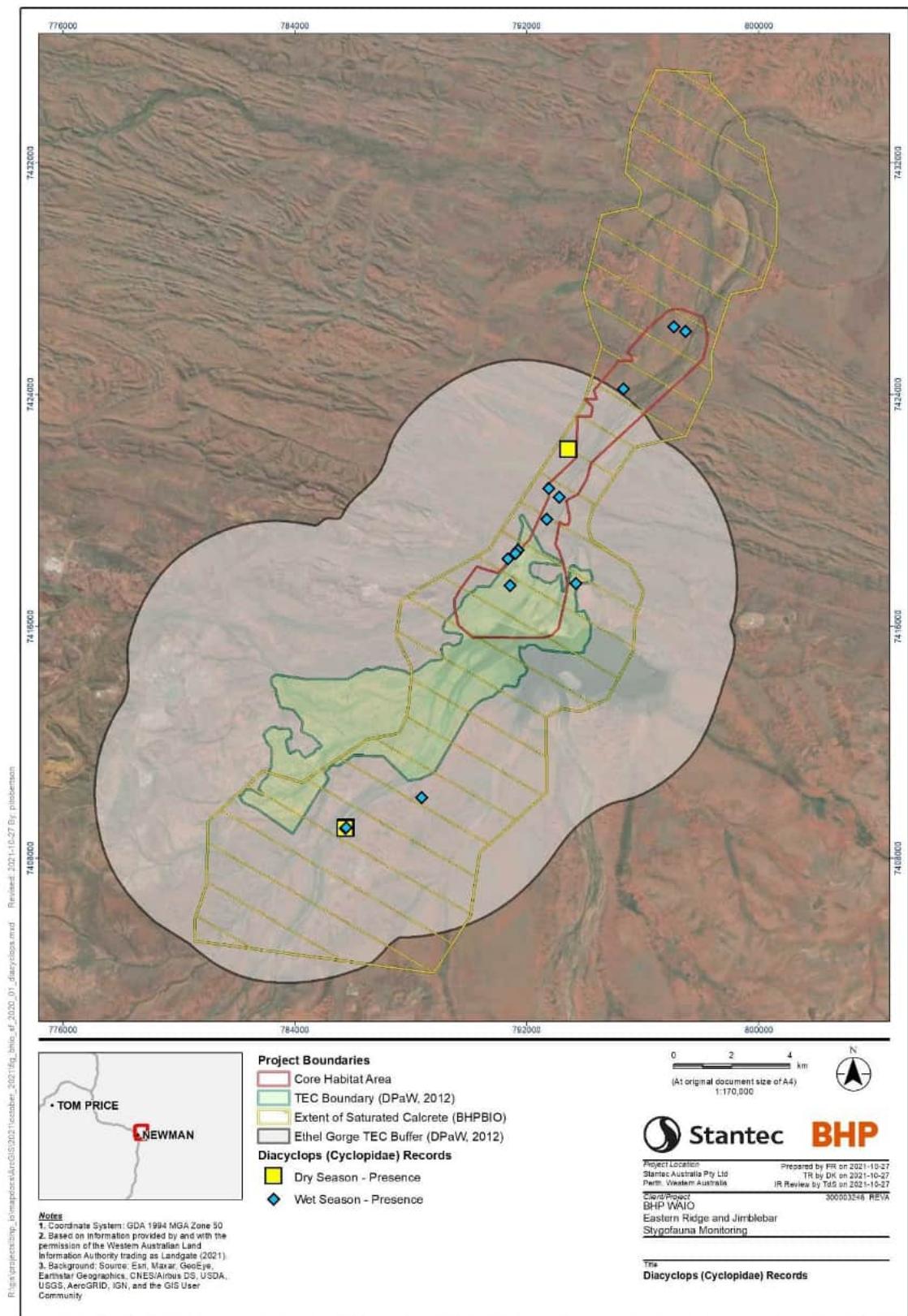


Figure 3-12: The distribution of *Diacyclops* taxa during the Program.

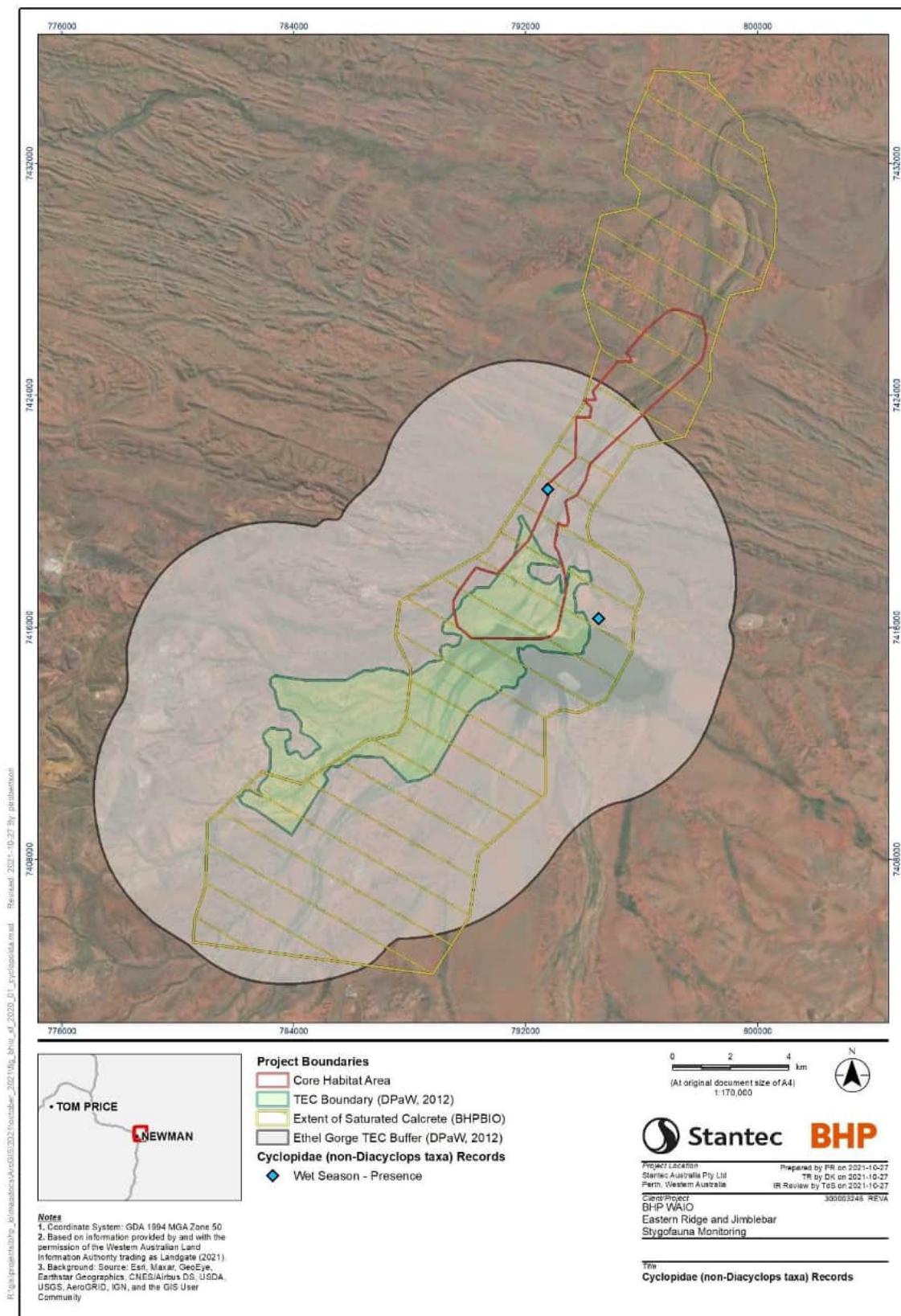


Figure 3-13: The distribution of non Diacyclops (Cyclopoida) during the Program.

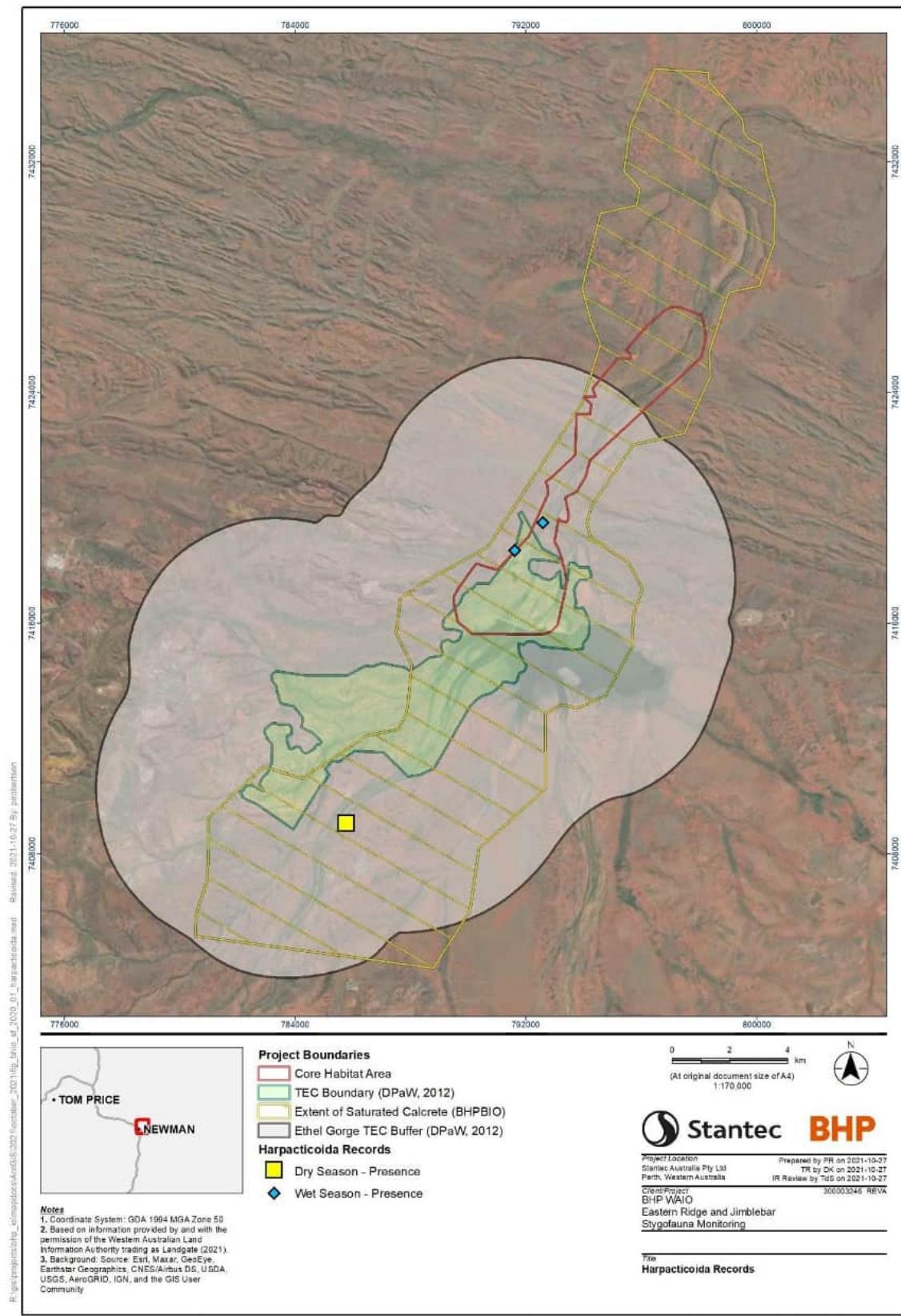


Figure 3-14: The distribution of Harpacticoida during the Program.

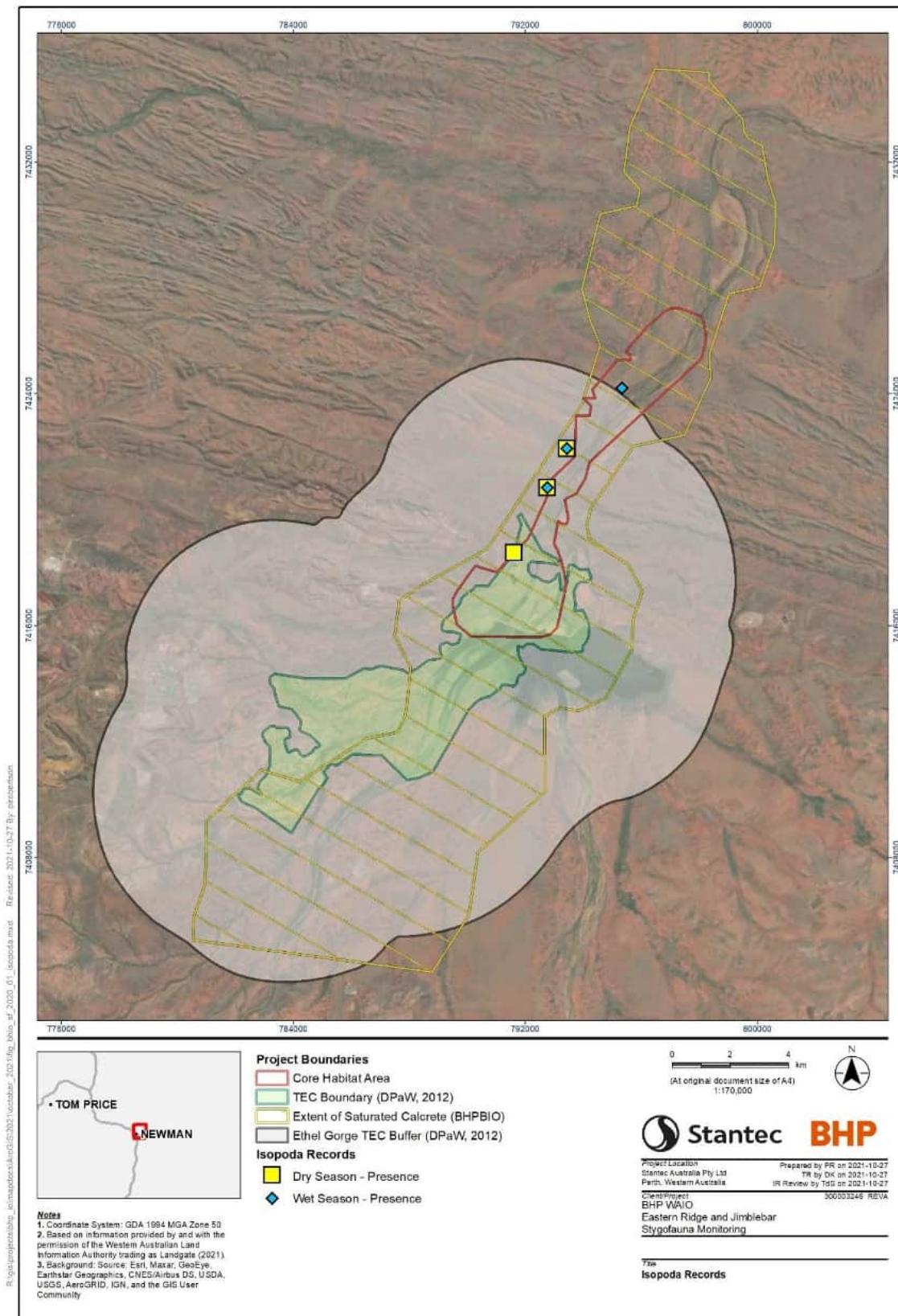


Figure 3-15: The distribution of Isopoda during the Program.

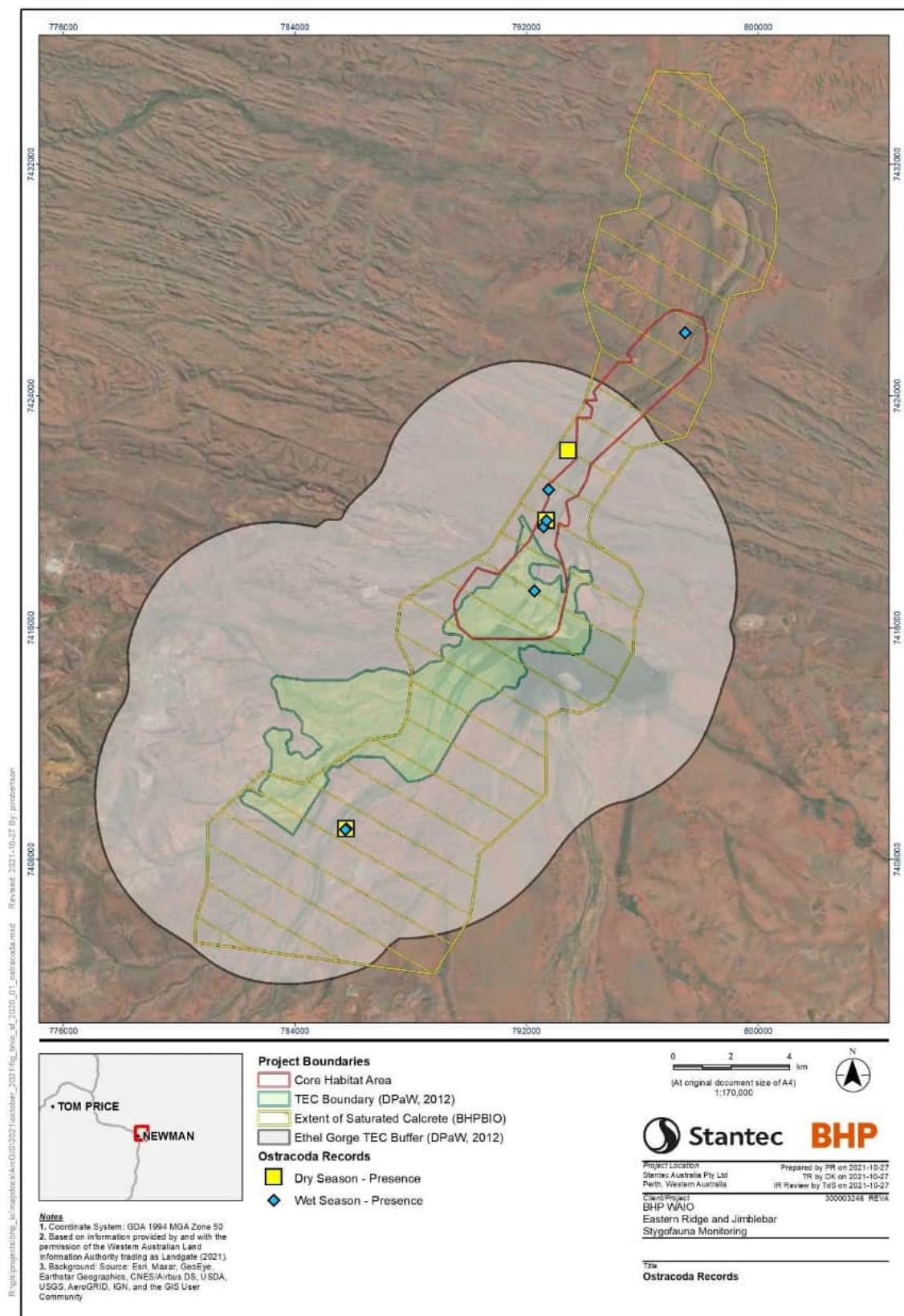
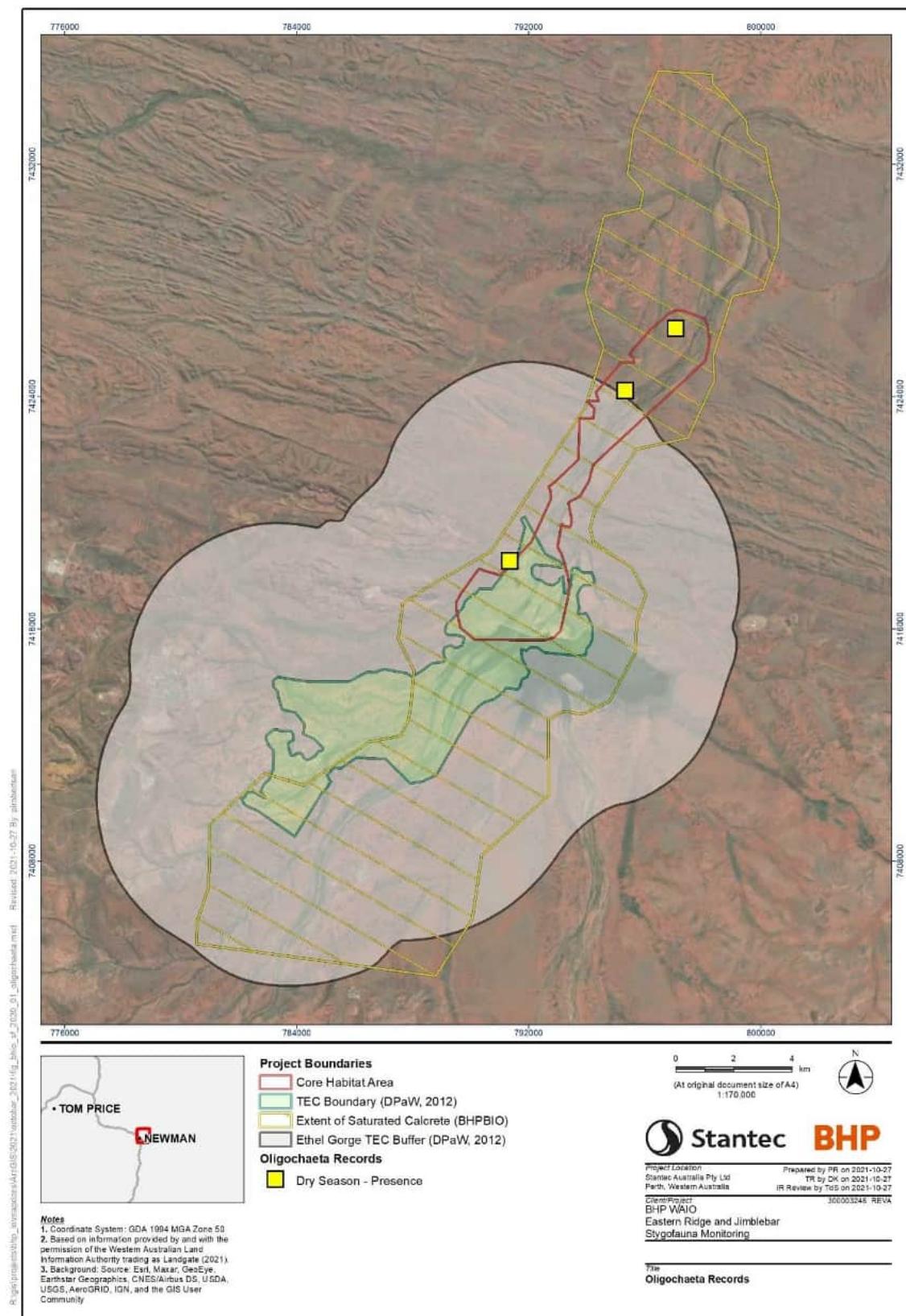


Figure 3-16: The distribution of Ostracoda during the Program.



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Figure 3-17: The distribution of Oligochaeta during the Program.

3.2.3 Species Richness and Abundance

3.2.3.1 Trends Over Time

A comparison of mean taxon richness per bore between 2013 and May 2021 highlighted variability between years and seasons; a trend also noted for total taxon richness (MWH 2015; Stantec 2017;2020a). The mean taxon richness per bore for the dry seasons was highest in 2019 (approximately 1 taxa), followed by 2020 (>0.7 taxa) (**Figure 3-18**). A peak was observed in the 2017 wet season, with the mean taxon richness per bore exceeding one. The mean taxon richness during the 2021 wet season (>0.7 taxa per bore) was similar to the value from 2015 (>0.7 taxa per bore) and represented a slight increase from the 2020 wet season. This may reflect rainfall patterns prior to the 2021 wet season, with mean taxon richness per bore found to increase in response to periods of high rainfall during an investigation of calcrete aquifers in the Yilgarn region (Hyde et al. 2017).

As with taxon richness, stygal abundance in the area has been shown to fluctuate both temporally and spatially. Total abundances exceeding 3,000 specimens have been collected during several seasons (Subterranean Ecology 2014), whereas respective totals of less than 200 stygofauna have been documented during the 2019 and 2020 dry seasons (Stantec 2020a) (**Table 3-4**). A range in excess of 1,900 specimens has been noted between bores in a single season, while yields from an individual bore can vary by more than 1,000 specimens.

Standardising the data to mean abundance per bore, the 2013 dry season was the most abundant monitoring round (>80 specimens per bore). In comparison, the following dry seasons (2014, 2019, 2020) had mean abundances of less than 10 specimens per bore (**Figure 3-18**). Of the wet seasons, 2014 and 2016 both averaged more than 70 specimens per bore, while a decreasing pattern was observed for the 2017 and 2020 wet seasons (~22 and 16 specimens per bore). In 2021, the mean number of specimens per bore increased slightly to approximately 30, consistent with the increased total abundance (689 specimens) (**Figure 3-18, Table 3-6**).

Several factors including survey effort, over-sampling and rainfall patterns were identified as potential contributors to the decline in wet season abundance between 2016 and 2020. While earlier monitoring rounds incorporated more than 40 bores (MWH 2015; Subterranean Ecology 2014), survey effort for recent monitoring rounds has been substantially reduced (22 to 26 bores) (Stantec 2017;2020b) (**Table 3-4, Table 3-5**). Changes in stygal community structure were also observed during monitoring at Exmouth, potentially linked to repeated sampling (Goater 2009). The repeated sampling and removal of stygofauna may have also contributed to decreased abundance in the Ethel Gorge system. Stygofauna are understood to have long life cycles, low metabolisms and few offspring (Mammola et al. 2021; Manenti et al. 2021), which potentially impacts recovery and recolonisation (Gibson et al. 2019).

Rainfall is considered to be one of the primary influences on stygofauna abundance. The decrease in wet season abundance between 2016 and 2020 corresponded to a prolonged dry period relative to previous monitoring rounds (2012-2015) (**Figure 3-19**). Conversely, above average rainfall in the months prior to the 2021 wet season likely contributed to an increase in stygofauna abundance. Compared to dry periods, the groundwater recharge that occurs in response to rainfall can result in greater infiltration of organic matter, potentially stimulating increased abundances and/or shifts in community dynamics (Sacco et al. 2021).

For this Program, the higher abundance in 2021, compared to previous monitoring rounds (2017 and 2019/2020) also corresponded to increased standing water levels and recharge from rainfall. There were no trends observed for stygofauna in relation to groundwater quality, with the various groundwater parameters generally below the GTVs, or historic maxima.

Over time, the most diverse stygal groups have been dominated by crustaceans including amphipods, bathynellaceans, cyclopoid and harpacticoid copepods, isopods and ostracods, with each well represented (**Appendix F**). Annelids (oligochaetes) have also been relatively speciose while other groups including Acarina, Nematoda, Platyhelminthes and Aphanoneura have been represented by fewer taxa and lower cumulative abundances (MWH 2015; Subterranean Ecology 2014) (**Appendix F**).

Despite some changes in stygal community structure, several core species, primarily crustaceans, have been consistently recorded over time. The amphipod *Chydaekata acuminata* represents the predominant core taxon; present during each monitoring round since 2009 with a cumulative abundance of almost 900 specimens (**Appendix F**). The occurrence of this species from 2009 onwards corresponds with improved taxonomic resolution. It is considered that the majority of *Chydaekata* indet. identified also belong to *Chydaekata acuminata*, potentially increasing the cumulative abundance to >1,000 specimens. The isopod *Pygolabis humphreysi* and ostracod *Pilbaracandona eberhardi* have also been consistently recorded over time, with records from each monitoring round since 2008, equating to more than 600 and 300 specimens respectively (**Appendix F**). *Nitocrella karanovici* (BO2) has also been recorded in relatively high numbers

(>900 specimens), although the records have been temporally patchy. However, the majority of core taxa are known from low abundances (<30 specimens), with several taxa including *Anzyclops* sp. B06, *Billibathynella* sp. OB1, *Coxicerberus* sp. OB2 and *Phreodrilidae* WAM indet1 represented by a single specimen only (**Appendix F**) (Stantec 2017).

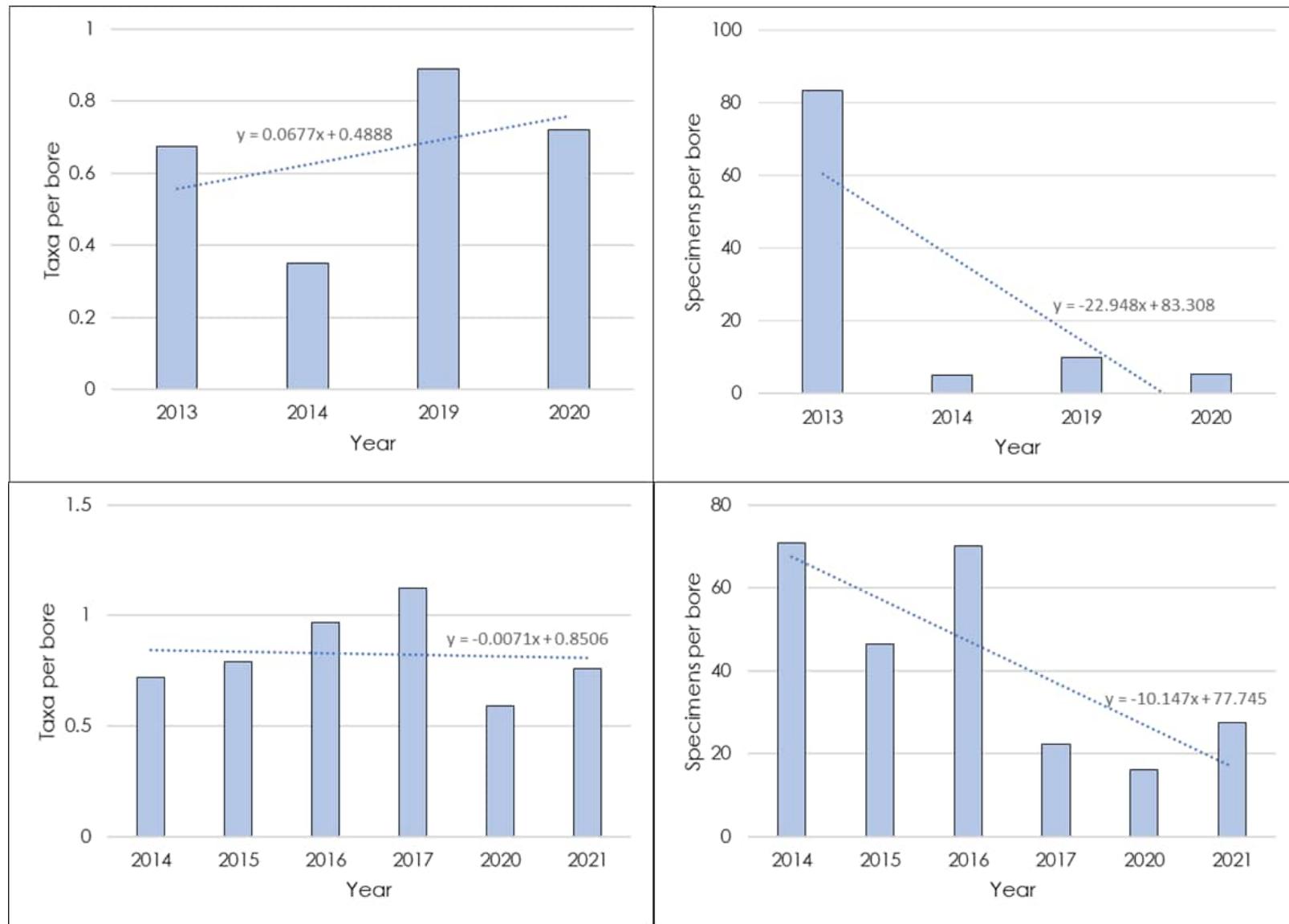


Figure 3-18: Mean taxa and specimen per bore for dry season (A) and (B) and wet season (C) and (D).

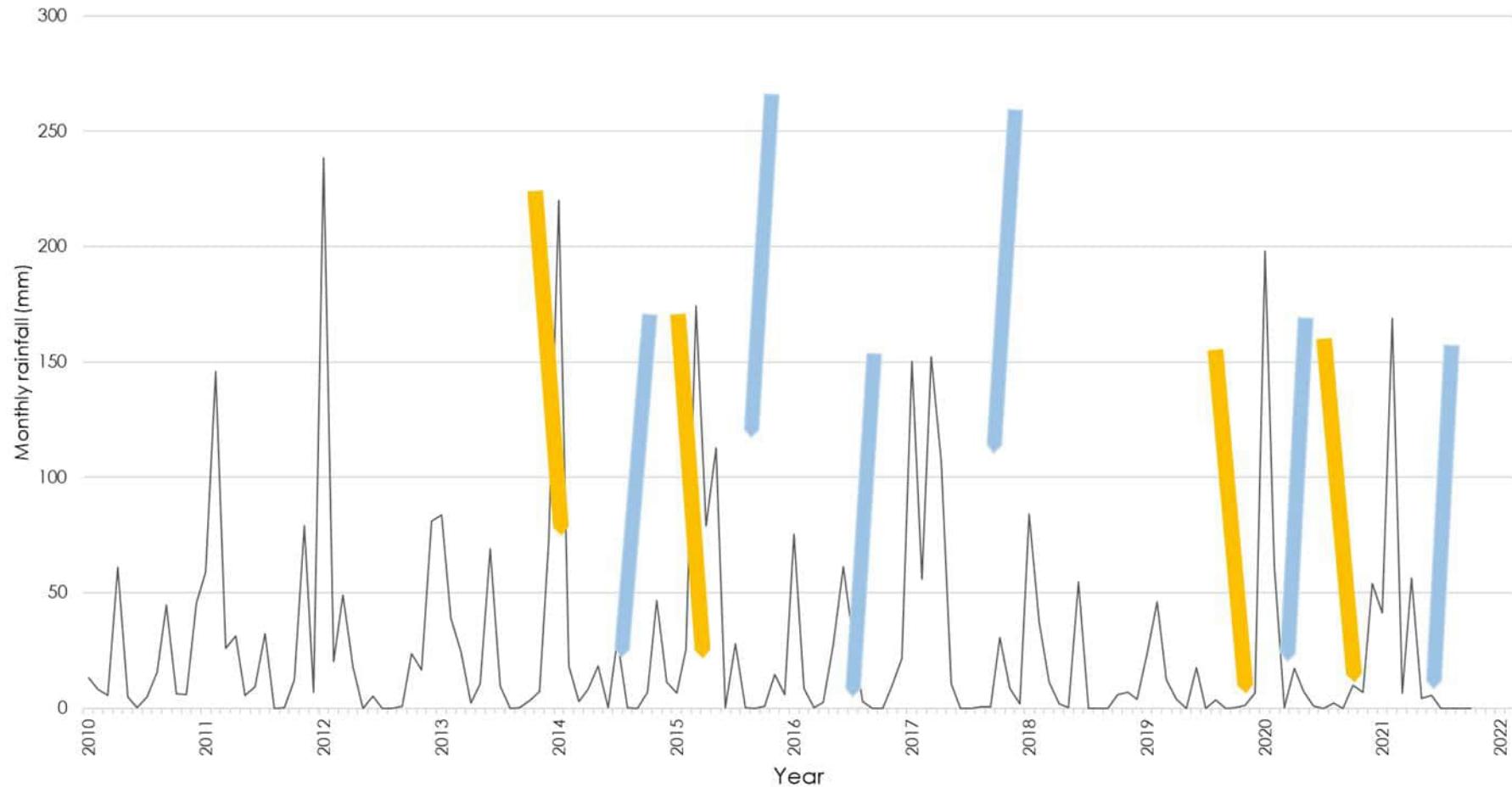


Figure 3-19: Monthly Rainfall totals recorded from Newman (BoM station No. 007176) from January 2010 to September 2021 (yellow and blue arrows represent dry and wet season monitoring rounds).

3.2.3.2 Estimators

Based on monitoring between November 2009 and May 2021, the broader Ethel Gorge area has yielded 46 core species (39 positively identified core species and seven indeterminate species (**Appendix G**). This represents an increase from the previous monitoring round due to the addition of *Pilbaranella ethelensis*, *Pilbaranella* sp., *Pilbaranella* sp. B. and *Origocandona* 'BOS099', either as updated records or new entries. The number of core species represents between 68.5 % and 95.9 % of those expected to occur in the area (**Table 3-7**). The Chao Mean 1 estimator suggests that a further two taxa may occur in the area, while an additional 23 taxa are predicted to occur using the Jack 2 Mean estimator.

The species accumulations curves for the estimators are generally still trending upwards (**Figure 3-20**). Extrapolation of the observed species accumulation curve demonstrated that up to 10 additional species could be recorded by with a two-fold increase in sampling effort.

For MZ 1 specifically, a total of 37 core endemic species have been recorded from MZ 1 between November 2009 and May 2021 comprising 32 positively identified species and five indeterminate species (**Appendix G**). This represented between 65.6 % and 86.9 % of the core species estimated to occur in MZ 1, equating to 44 and 58 species (**Table 3-8**). The species accumulation curves for six of the seven species richness estimators are still trending upwards, with Chao 2 Mean starting to plateau (**Figure 3-21**).

The analyses, based on the data from November 2009 and May 2021 indicate that additional sampling would be required to collect all of the core taxa present within the broader Ethel Gorge area. This was also reflected for MZ 1 only.

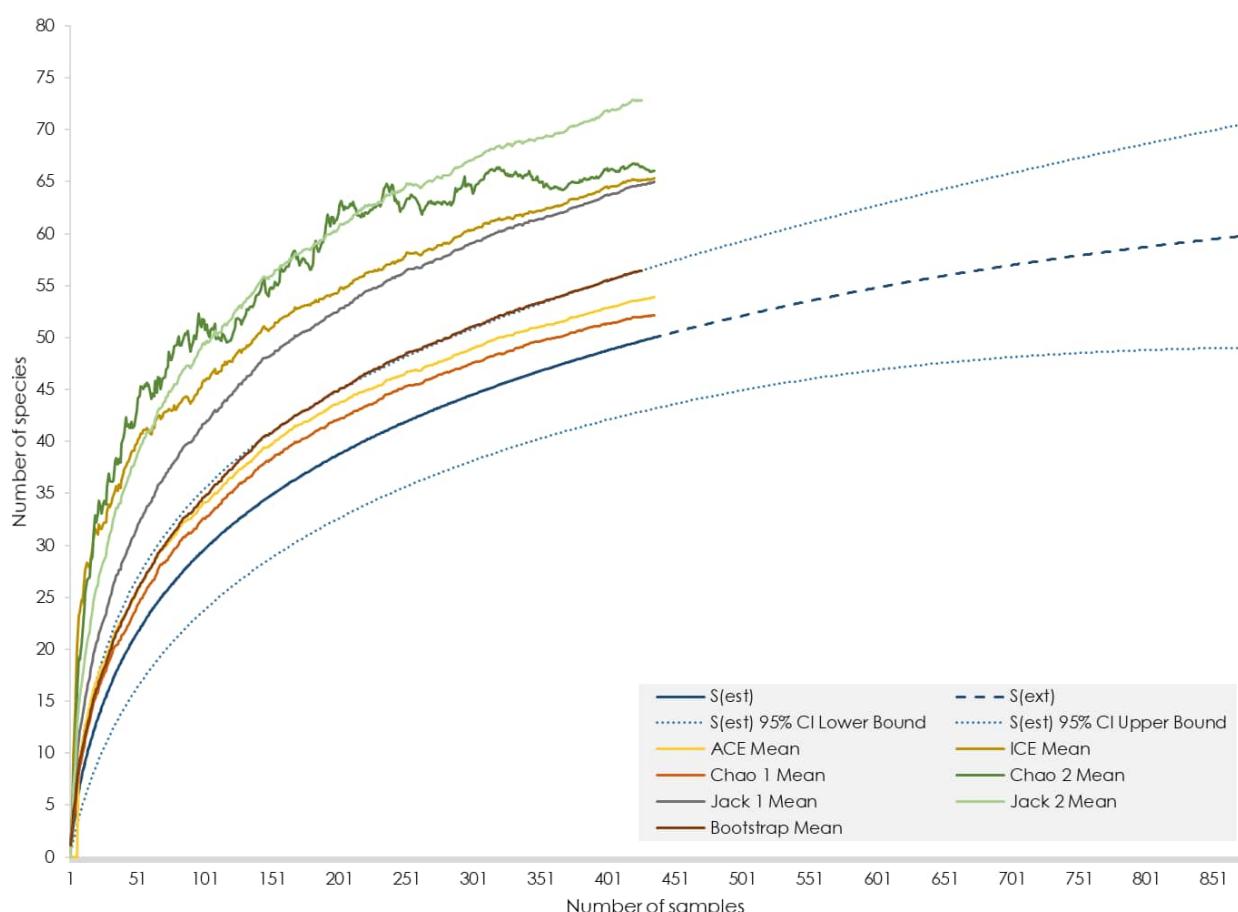


Figure 3-20: Stygofauna core species accumulation curves for observed ($s(\text{est})$), extrapolated ($s(\text{ext})$) and various species richness estimators (EstimateS (Colwell 2013) for the broader Ethel Gorge area (all monitoring zones sampled from 2009 to May 2021).

Table 3-7: Observed core stygofauna species richness for the broader Ethel Gorge area for monitoring zones sampled during the stygofauna monitoring program *2009 to May 2021), relative to estimated species richness.

Observed vs Estimated		Obs. & Pred. spp richness	% Predicted Collected
Obs.	Sobs	50	
	Extrapolated (870 samples)	59.74	83.7%
Diversity estimators	Chao 1 Mean	52.1	95.9%
	ACE Mean	53.9	92.8%
	Bootstrap Mean	56.7	88.1%
	Jack 1 Mean	65.0	77.0%
	ICE Mean	65.3	76.6%
	Chao 2 Mean	66.0	75.7%
	Jack 2 Mean	72.9	68.5%
Range		52.1 - 72.9	68.5 - 95.9%

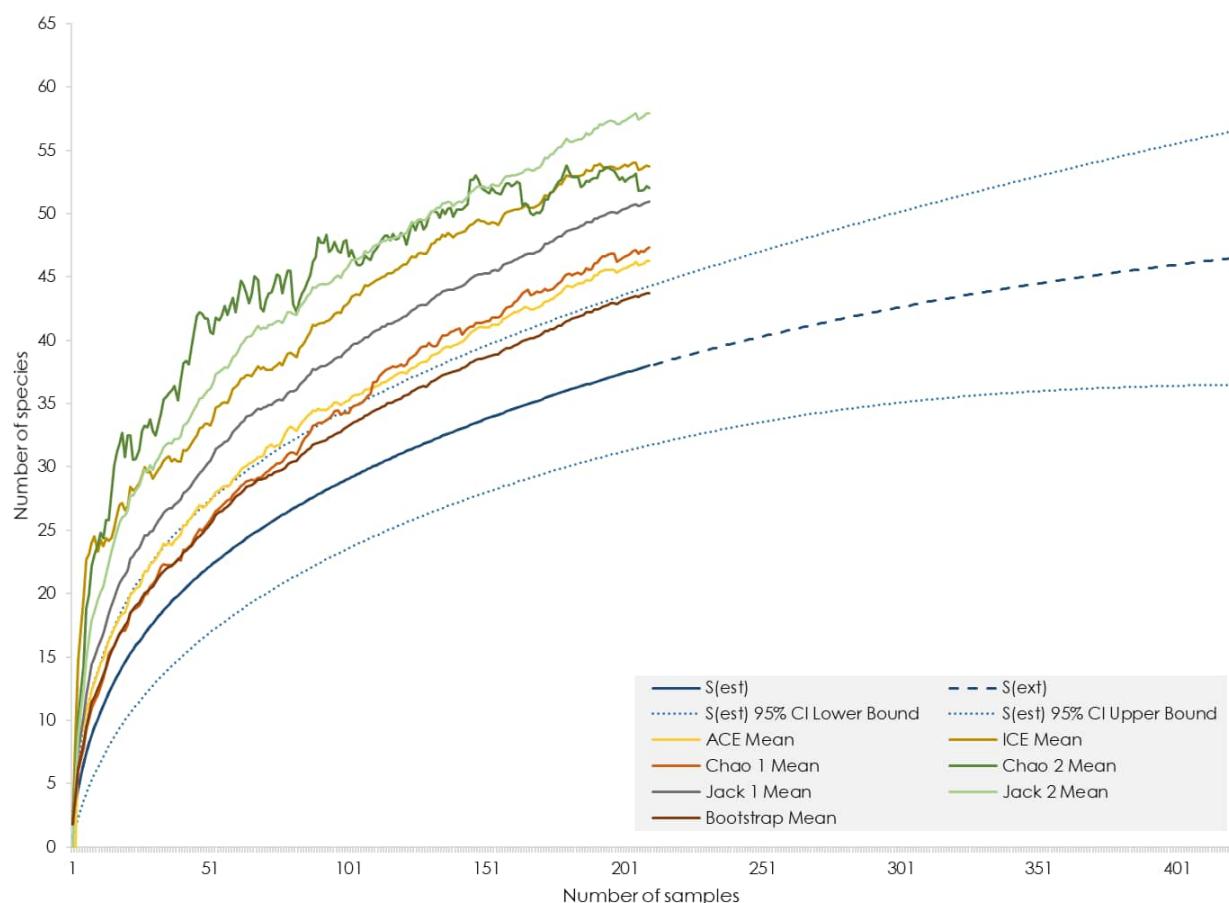


Figure 3-21: Stygofauna core species accumulation curves for observed ($s(\text{est})$), extrapolated ($s(\text{ext})$) and various species richness estimators (EstimateS (Colwell 2013) for MZ 1 based on the stygofauna monitoring program (2009 to May 2021).

Table 3-8: Observed core stygofauna species richness for MZ 1 based on the stygofauna monitoring program (2009 to May 2021), relative to estimated species richness.

Observed vs Estimated		Obs. & Pred. spp richness	% Predicted Collected
Obs.	Sobs	38	
	Extrapolated (420 samples)	46.46	81.8%
Diversity estimators	Bootstrap Mean	43.7	86.9%
	ACE Mean	46.3	82.1%
	Chao 1 Mean	47.3	80.3%
	Jack 1 Mean	50.9	74.6%
	Chao 2 Mean	52.0	73.0%
	ICE Mean	53.8	70.7%
	Jack 2 Mean	57.9	65.6%
	Range	43.7 - 57.9	65.6 - 86.9%

3.2.4 Indicator Species

To function as an effective indicator species in the assessment of ecosystem health, a taxon should ideally be representative of and unique to the community, well distributed within the specific area and have adequate population density (Hilty and Merenlender 2000; Holt and Miller 2010). However, stygofauna are naturally heterogeneous in distribution (Mammola et al. 2021), potentially limiting the utility of most taxa as indicator species.

The harpacticoid copepod *Nitocrella karanovici* (formerly *Nitocrella* OB) had previously been identified as a potential species (Bennelongia 2013). Of the other core species, the amphipod *Chydaekata acuminata* has been commonly recorded over time and could be investigated as a potential indicator species. Established environmental tolerance limits are another characteristic of indicator species (Hilty and Merenlender 2000). These limits are not well understood for the core stygofauna species within the Ethel Gorge TEC and further work would be required to determine whether select core species could be effectively used as indicators of ecosystem health.

4. Conclusion

4.1 Groundwater Properties

The results of the Program indicated that groundwater quality was mostly below the groundwater trigger values (GTVs), or historic maxima, and trends were related to environmental and/or hydrogeological factors. The SWLs in both monitoring rounds were below the GTVs except for one bore, with increases related to groundwater recharge following rainfall after prolonged dry conditions. There were also some exceedances for groundwater quality across both seasons.

Groundwater pH was mostly alkaline, with several monitoring zones showing increasing trends over time. Salinity concentrations (including major ions) were elevated in two bores across both seasons, however remained below the 20% variance of the 80th percentile GTV. High levels of calcium were related to the calcareous environment of the Ethel Gorge aquifer system.

Nutrient exceedances above the 80th percentile GTVs were more evident in the dry season, likely attributed to lower rainfall compared to the wet season. Metal concentrations were generally below detection, with the exception of boron and manganese across monitoring zones, indicative of the natural enrichment of groundwaters. Currently, there is insufficient data at the appropriate detection limits to develop GTVs for metals, with increased sampling and analytical sensitivity required to develop a robust dataset that can be used for this purpose. However, there were no changes in groundwater quality from BHP WAIO operations evident in monitoring zone 1. Metal GTVs for barium, boron, manganese, molybdenum and zinc may be developed in the 2021/2022 Program if additional detectable concentrations become available across the monitoring zones. However, this would need to be addressed in a separate scope.

4.2 Stygofauna

A total of 26 stygofauna species were recorded during the Program, from six higher level taxonomic groups; Amphipoda, Bathynellacea, Copepoda, Isopoda, Ostracoda and Oligochaeta. This included 13 core taxa (taxa endemic to the wider Newman area, including the Ethel Gorge TEC). Of these, *Pilbaranella ethelensis*, *Pilbaranella* sp. and *Origocandona 'BOS099'* were new to the core taxa list. However, representatives of these taxa have been identified from the Ethel Gorge aquifer system during other studies.

During the dry season, more than 130 specimens were recorded, representing five higher level taxonomic groups and 18 taxa, including nine core taxa. Stygal abundance increased during the wet season, with 689 specimens across five higher level taxonomic groups and 19 taxa, eight of which were core taxa. The stygofauna numbers during the wet season were also comparatively higher than previous wet season monitoring rounds in 2017 and 2020. This corresponded to increased standing water levels during this Program, reflecting above average rainfall, which in turn facilitates greater inflows of organic matter.

Consistent with previous monitoring rounds, the amphipod *Chydaekata acuminata* was the predominant core taxon. The isopod *Pygolabis humphreysi* and ostracod *Pilbaracandona eberhardi* are among the other core species that have been commonly recorded over time, including during this Program. The harpacticoid copepod *Nitocrella karanovici* has also been recorded in relatively high numbers although distribution has been temporally heterogeneous.

Nitocrella karanovici, a core species, has been identified as a potential indicator species. Of the other core species, *Chydaekata acuminata* may also warrant further investigation, and is common throughout the Ethel Gorge aquifer system. However, increased understanding of environmental tolerance levels is required to determine the suitability of these taxa as effective indicators of ecosystem health.

4.3 Summary and Recommendations

There were no impacts observed for stygofauna in relation to mining activities during the Program, based on SWLs and groundwater quality. However, there is insufficient data at appropriate detection levels to develop GTVs for metals and provide interpretation.

The findings of the Program along with previous monitoring rounds indicate that current groundwater management practices have been successful in mitigating potential impacts to the Ethel Gorge stygofauna TEC from BHP WAIO operations. It is also considered that adequate saturation of the core habitat has been maintained, enabling persistence of stygofauna.

Temporal trends note a pattern of decline in wet season stygofauna abundance between 2016 and 2020, with lower densities compared to previous monitoring rounds. This potentially reflects factors including

reduced survey effort (fewer sites), removal of stygofauna during sampling, and prolonged dry conditions. The abundance during the (2021) wet season while also lower than the earlier monitoring rounds (2012 to 2016), showed an increase compared to 2017 and 2020. This corresponded to above average rainfall and demonstrated the capacity of the stygofauna population to respond under favourable conditions (likely increased organic matter associated with groundwater recharge).

Several recommendations for future monitoring and/or investigations have been outlined for consideration by BHP WAIO, based on the findings of the Program. These include:

- Increase the collection of metals data and improve the sensitivity of detection for analysis, to allow the development of a statistically robust dataset and determination of relevant GTVs, which should be undertaken separately to this Program;
- Increase the number of bores sampled, to clarify trends in stygofauna species richness and abundance;
- Undertake a separate, comprehensive review of stygofauna data, in order to:
 - Elucidate temporal and spatial changes in core species composition relative to hydrogeological characteristics of the area
 - Develop appropriate trigger levels for species richness and abundance, if possible, and;
 - Investigate potential indicator species from the core taxon list, focusing on distribution and tolerance limits.

5. References

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A photograph of a person's hand reaching upwards towards a bright, glowing light source, likely the sun, at sunset or sunrise. The hand is silhouetted against the warm orange and yellow sky. In the lower-left foreground, a portion of a guitar is visible, its strings and neck partially obscured by shadow. The overall mood is contemplative and spiritual.

Appendices

Appendix A Stygofauna 2020/2021 bore details and survey effort

Table A1: Bore details and survey effort for the Program.

Bore Code	Previous Bore Code	Latitude (DMS)	Longitude (DMS)	Elevation (AHD)	Within TEC?	Monitoring Zone	Area Occurs in	Aquifer Unit	Aquifer Screened	Comments
HEOP0388	W79D	23°17'47"S	119°51'44"E	513	No	1	Fortescue River - Upper Catchment	Orebody - Brockman Iron Formation	Unknown	Within Brockman Iron Formation
HEOP0417	W107	23°19'41"S	119°51'29"E	508	Yes	1	Fortescue River - Confluence zone	Upper Alluvial - palaeochannel over proterzoic bedrock	Screened calcrete	Downstream Ophthalmia Dam and within Fortescue River riparian zone
HEOP0425	W115	23°19'33"S	119°52'19"E	509	Yes	1	Fortescue River - Confluence zone	Upper Alluvial - palaeochannel over proterzoic bedrock	Screened over shale mostly, 2 m over gravel	Downstream Ophthalmia Dam and just outside Fortescue River & Warrawanda Creek confluence riparian zone
HEOP0504	W193D	23°17'57"S	119°51'57"E	504	No	1	Ethel Gorge	Upper Alluvial / calcrete	Unknown	Within Ethel Gorge riparian zone
HEOP0574M	W262	23°18'22"S	119°51'42"E	506	Yes	1	Ethel Gorge	Upper Alluvial / calcrete	Shallow bore Shallow bore screened in gravel and calcrete	Within Ethel Gorge calcrete within riparian zone
OB23REG1		23°19'37"S	119°50'59"E	512	Yes	1	Homestead Creek Catchment	Upper Alluvial - palaeochannel over proterzoic bedrock	Unknown	Outside Homestead Creek riparian zone
T399		23°17'03"S	119°52'07"E	502	No	1	Fortescue River - Upper Catchment	Upper Alluvial - palaeochannel over proterzoic bedrock	Unknown	Within riparian zone of tributary of Fortescue River
HEOP0462M	W152	23°15'54"S	119°53'12"E	498	No	1	Fortescue River - Upper Catchment	Upper Alluvial - palaeochannel over proterzoic bedrock	Unknown	Near Fortescue River riparian zone
W56		23°18'29"S	119°51'39"E	507	Yes	1	Ethel Gorge	Upper Alluvial / calcrete	Screened only in weathered basement	Within Ethel Gorge calcrete elevated above riparian flood zone
W116		23°14'48"S	119°54'26"E	494	No	1	Fortescue River - Upper Catchment	Upper Alluvial - palaeochannel over proterzoic bedrock	Screened over shale mostly, 10 m over gravel	Near Fortescue River riparian zone
W117		23°14'43"S	119°54'12"E	496	No	1	Fortescue River - Upper Catchment	Upper Alluvial - palaeochannel over proterzoic bedrock	Unknown. Log indicates gravel (0-25 mbgl) over shale (25-38.4 mbgl)	Near Fortescue River riparian zone
EEX931		23°20'11"S	119°52'49"E	509	Yes	1B	Fortescue River - Confluence zone	Upper Alluvial - palaeochannel over proterozoic bedrock	Unknown	Is situated approx. 250 m north (downstream) of Ophthalmia Dam wall
HEA0121	WP23-12i	23°19'07"S	119°50'56"E	508	Yes	3	Homestead Creek Catchment	Orebody - Brockman Iron Formation	Within Brockman Iron Formation - requires Pit Access	Within Brockman Iron Formation
HEA0126	WP14S	23°18'57"S	119°51'08"E	507	Yes	3	Homestead Creek Catchment	Orebody - Brockman Iron Formation	Within Brockman Iron Formation - requires Pit access	Within Brockman Iron Formation
HEA0133	P20S	23°19'01"S	119°51'05"E	508	Yes	3	Homestead Creek Catchment	Orebody - Brockman Iron Formation	Within Brockman Iron Formation - requires Pit access	Within Brockman Iron Formation
HEOP0524 - NEW		23°20'14"S	119°50'8"E	510	No	3	Homestead Creek Catchment	Upper Alluvial - palaeochannel over proterozoic bedrock	Unknown	Is situated approx. 1.1 kilometres west of Ophthalmia Dam wall.
T411A		23°20'34"S	119°47'16"E	526	No	3	Homestead Creek Catchment	Upper Alluvial - palaeochannel over proterzoic bedrock	Unknown	Within Homestead Creek riparian zone
HEOP0398M*	W088	23°23'37"S	119°49'17"E	521	No	4	Fortescue River Catchment	Upper Alluvial - palaeochannel over granites	Not within Fortescue River riparian zone. East of river	EWS Infrastructure constructed on top of bore - NPI were able to remove for the Program.
C313^		23°25'11"S	119°46'37"E	530	No	4	Fortescue River Catchment	Upper Alluvial - palaeochannel over granites	Unknown	Not within Fortescue River riparian zone. West of river
EA0285R	W196	23°24'07"S	119°50'25"E	518	No	4	Warrawanda Creek Catchment	Upper Alluvial - palaeochannel over granites	Unknown	Within low lying broad drainage area that is between Fortescue River and Warrawanda Creek.
HEOP0524 - UNKNOWN3	UNKNOWN3	23°25'35"S	119°46'37"E	529	No	4	Fortescue River Catchment	Upper Alluvial - palaeochannel over granites	Unknown	Not within Fortescue River riparian zone. West of river
W028		23°24'12"S	119°47'46"E	523	No	4	Fortescue River Catchment	Upper Alluvial - palaeochannel over granites	Screened base of calcrete (largely unsaturated), sand and granite	Within Fortescue River riparian zone
W029		23°24'13"S	119°47'45"E	517	No	4	Fortescue River Catchment	Upper Alluvial - palaeochannel over granites	Screened base of calcrete (largely unsaturated), sand and granite	Within Fortescue River riparian zone
W201		23°23'52"S	119°49'52"E	532	No	4	Warrawanda Creek Catchment	Upper Alluvial - palaeochannel over granites	Unknown	Within low lying broad drainage area that is between Fortescue River and Warrawanda Creek and shows expressions of groundwater salinity being high and close to surface through vegetation type present and salty soil crust. Falls within area that salt has naturally accumulated due to low groundwater flow regime.
W231		23°12'45"S	119°54'18"E	490	No	5	Fortescue River - Upper Catchment	Upper Alluvial - palaeochannel over proterzoic bedrock	Screened mostly in basement.	Approx. 1.25 km from confluence of Kalgan Creek and Fortescue River
HEOP0317M	W013	23°20'21"S	119°45'39"E	533	No	6	Whaleback Creek Catchment	Upper Alluvial - palaeochannel over proterzoic bedrock	Unknown.	Within Whaleback Creek riparian zone

Note: * indicate previously inaccessible historic bore sampled in the May 2021 wet season survey, ^ indicate bore has been replaced by a historic bore in the wet season.

Appendix B SWL Historic Data

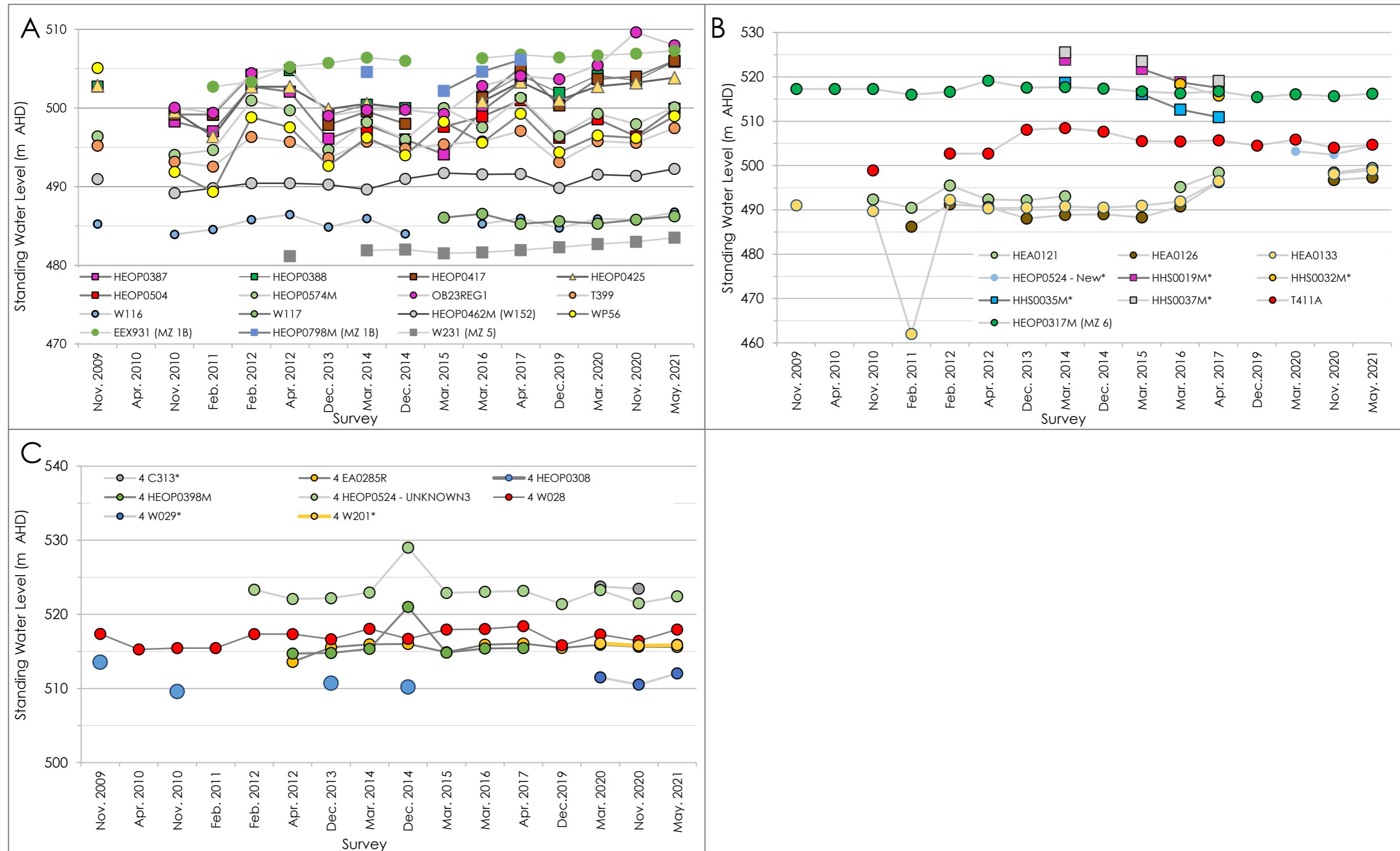


Figure B1: Historic SWL data of monitored bores from 2009 to 2021. (A) MZ1, MZ1 B & MZ5, (B) MZ3 & MZ6, and (C) MZ4 from the Program.

Appendix C pH Historic Data

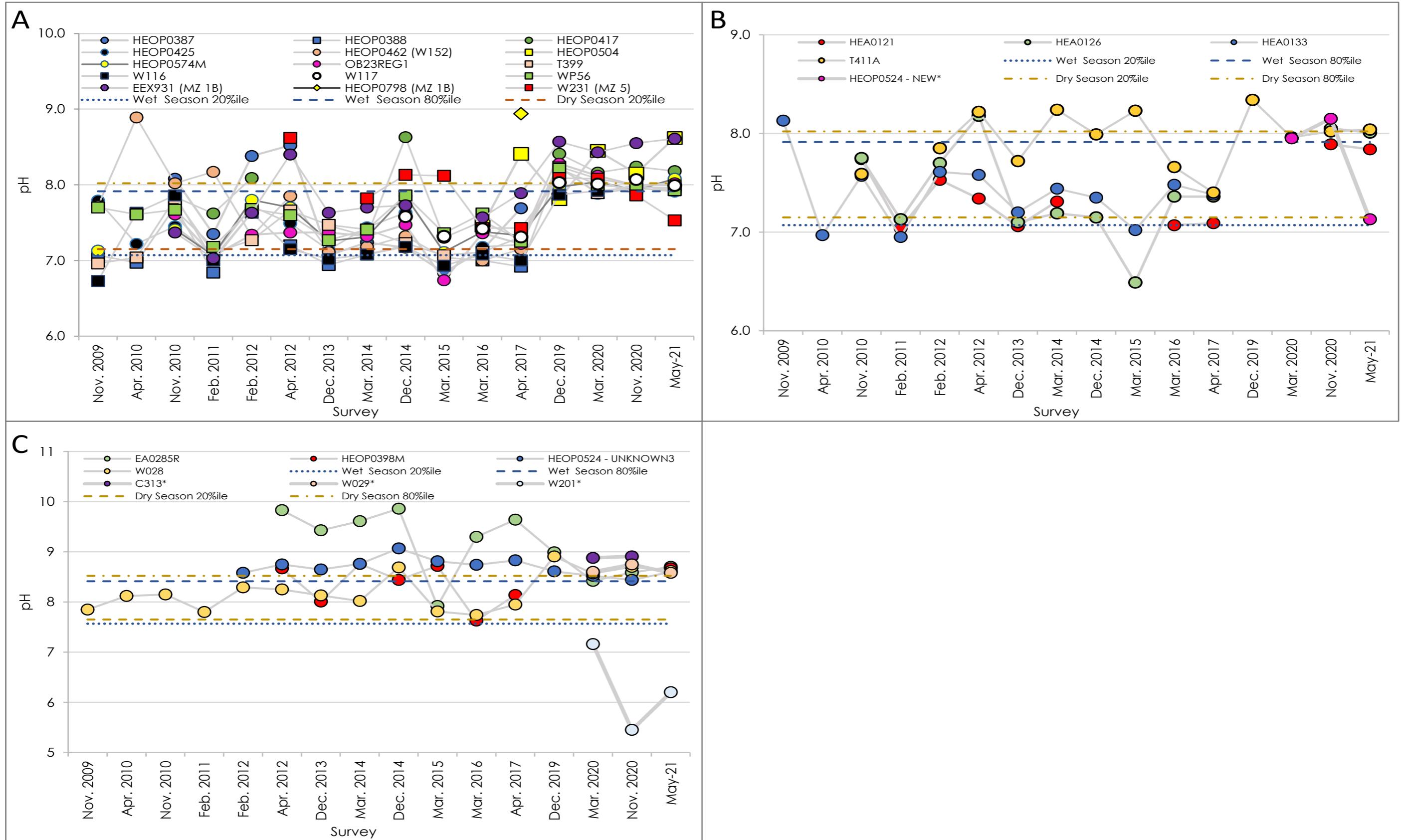


Figure C1: Historic pH data of monitored bores from 2009 to 2021. (A) MZ1, MZ1 B & MZ5, (B) MZ3 & MZ6, and (C) MZ4 from the Program.

Appendix D Salinity Historic Data

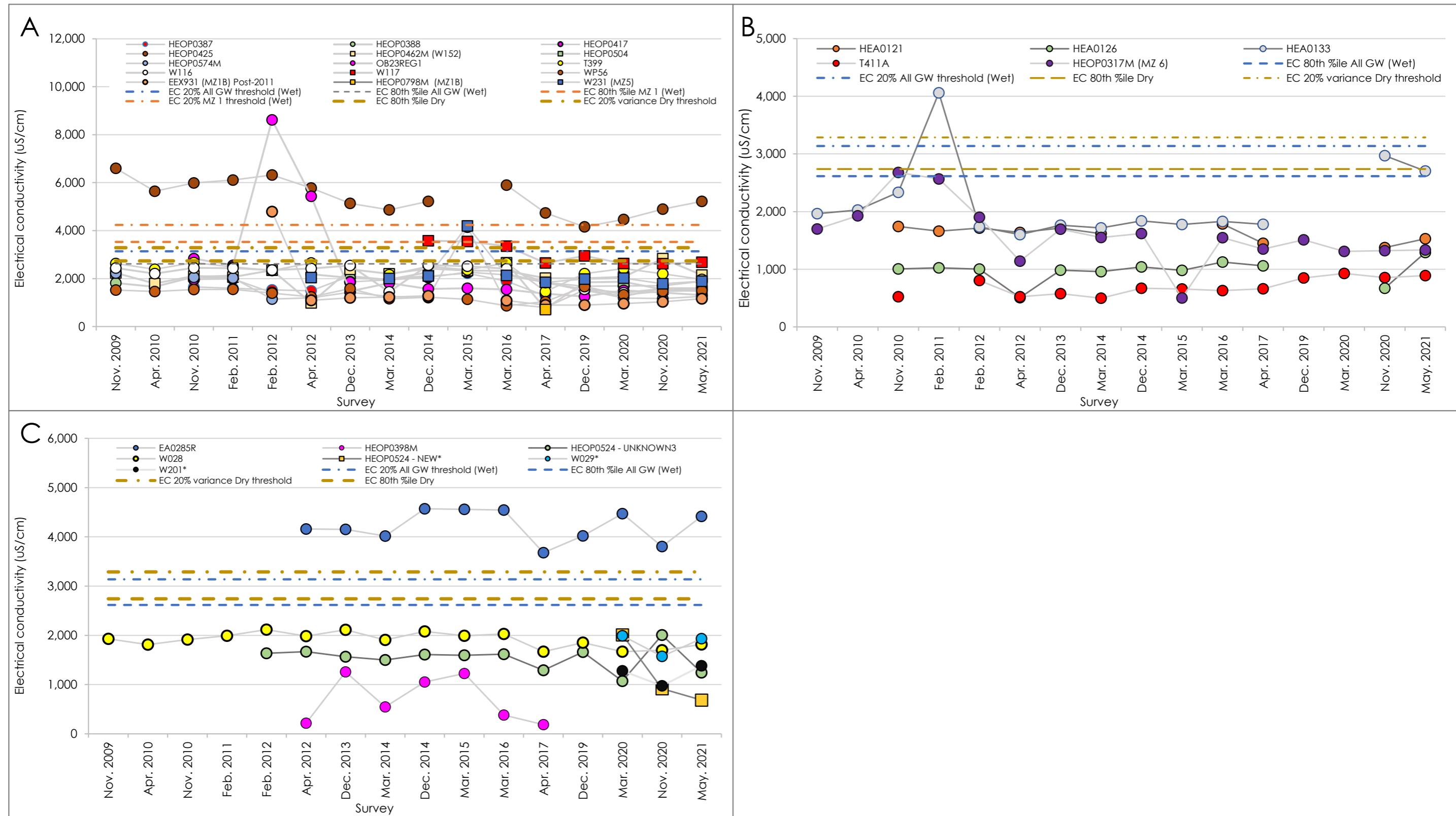


Figure D1: Historic EC data of monitored bores from 2009 to May 2021. (A) MZ1, MZ1 B & MZ5, (B) MZ3 & MZ6, and (C) MZ4 from the Program.

Appendix E Hydrochemical Types

Hydrochemical Properties

Previous analysis (MWH 2016a) was undertaken to investigate the ionic composition of groundwater within the monitoring zones. The analysis indicated groundwater a range of hydrochemical types, summarised in **Table E1** and presented in **Figure E1**.

Table E1: Monitoring zone hydrochemical and ionic characterisation.

Monitoring Zone	Hydrochemical and Ionic Characterisation
Monitoring Zone 1	Na-Cl-HCO ₃ groundwater type dominates, with chloride and bicarbonate as the dominant anions, and sodium as the dominant cation type. However, in bores HEOP0425 (W115), HEOP0504 (W139D) and HEOP0387 (W078) chloride is the exclusive dominant anion and bicarbonate is the exclusive dominant anion in bores T401, HEOP057M (W262) and W056
Monitoring Zone 1 B	Na-Cl-SO ₄ is the dominant type of water for EEX931 groundwater, with sodium as the dominant cation and either chloride or sulphate as the dominant anion
Monitoring Zone 2*	Generally comprised of Na-Cl water type, however with variability in the dominant cation between the two bores. NODDY bore differs from bore W247 as it has a greater proportion of calcium and magnesium and bicarbonate, whereas W247 has a greater proportion of sulphate.
Monitoring Zone 3	Generally classified as Mg-HCO ₃ groundwater. However, OB23REG1 has sodium as the dominant cation and the bores HEC0303 and HIST0723 have calcium as the dominant cation. These exceptions also generally have different dominant anions, with sulphate (HIST0233 and HEC0303) and chloride (OB23REG1 and PS02), as the dominant anions in some of the Zone 3 bores.
Monitoring Zone 4	Na-Mg-Cl-HCO ₃ groundwater type dominates, with Cl as the dominant anion and Na as the dominant cation type, except for bore W196, which is exclusively of the Na-Cl type. Bores HEOP0398M (W088) and HEOP0497 also show a greater proportion of bicarbonate relative to chloride and/or sulphate.
Monitoring Zone 5	Bores show similarities with the Zone 4 bores. Na-Mg-Cl-HCO ₃ is the dominant type for Zone 5 bores. However, there are a small number of bores with groundwater indicating a different water type. The main exception is bore W231 which indicates chloride is the exclusive anion and is Na-Mg-Cl type water. Bores W229, W213 and W203, located closest to the Fortescue Marsh also have a higher proportion of bicarbonate as the dominant anion.
Monitoring Zone 6	Groundwater is mixed Mg-Na-Ca-HCO ₃ -Cl type, somewhat similar to Zone 3 bores, with HCO ₃ as the dominant anion, and no dominant cation type.

Note: * indicates monitoring zone is no longer surveyed due to inaccessibility.

In addition, within the Jimblebar and OB 31 areas (**Figure E2**), the following characteristics were identified:

Jimblebar — Groundwater generally has no dominant cation and no dominant anion and is generally classified as Na-Mg-Ca-Cl-HCO₃-SO₄ type water. Generally, sodium followed by magnesium and calcium are the dominant cations and either chloride or bicarbonate is the dominant anion and to a lesser degree sulphate.

OB 31 — Groundwater generally has no strongly dominant cation and anion and is generally classified as Mg-Ca-Na-HCO₃-Cl type water. Generally, magnesium followed by calcium and sodium are the principal cations and either chloride or bicarbonate is the dominant anion. Relative to Jimblebar bores OB31 bores are characterised by a higher proportion of magnesium, calcium relative to sodium and bicarbonate relative to chloride and sulphate.

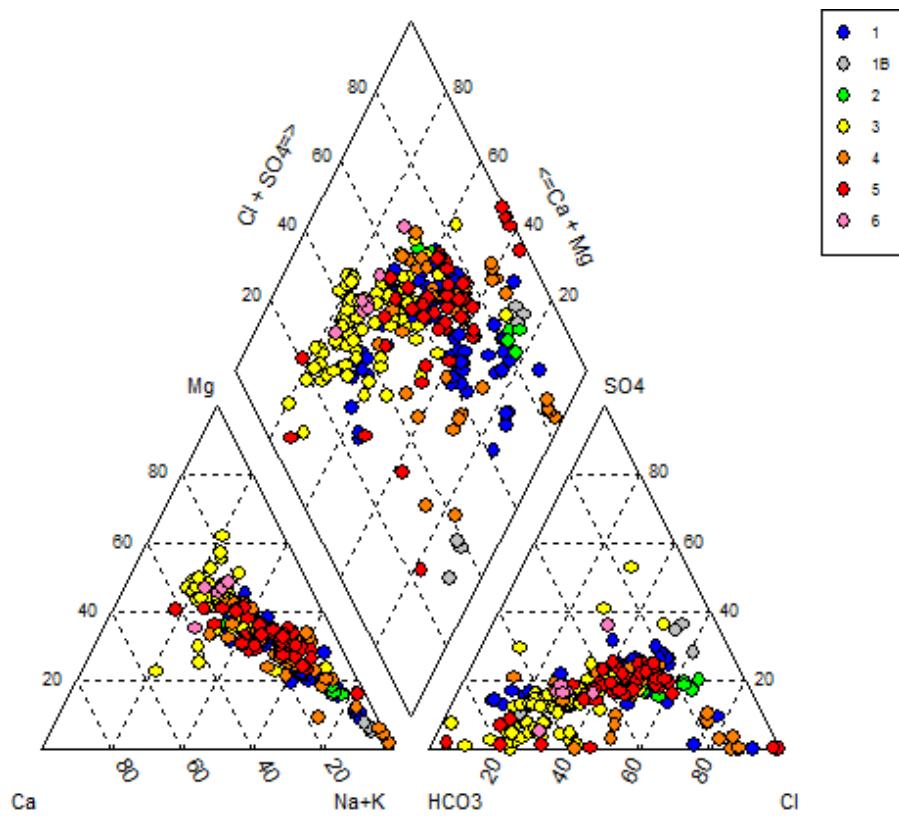


Figure E1: Piper plot comparison of hydrochemical properties among monitoring zones.

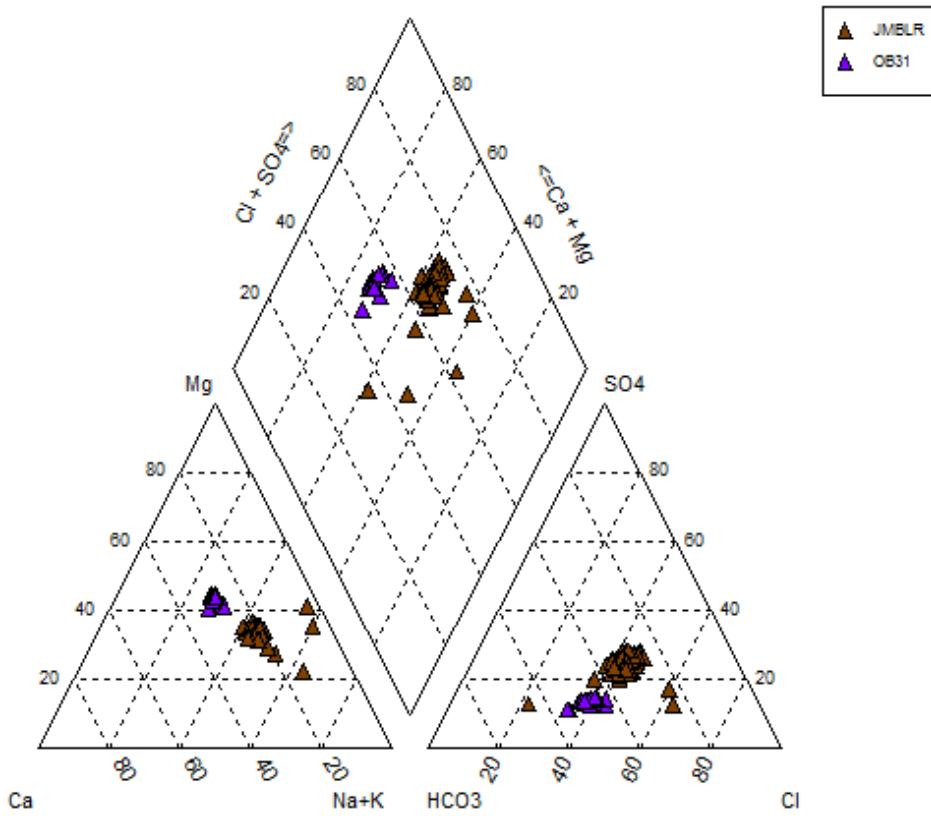


Figure E2: Piper plot comparison of hydrochemical properties at Jimblebar (JMBLR) and OB31.

The spatial distribution of the hydrochemical types also indicated mixing of the two major groundwater groups (**Figure E3**):

The Mg-Ca-HCO₃ dominant type (generally Zone 3 bores) that flows from the west into Ethel Gorge's upstream section and originates in dolomite or calcrete aquifers in the Homestead area. It is augmented by sulphate and chloride concentrations to a varying degree, suggesting mixing along the flowpaths with other signatures, possibly influenced by sulphide-rich shales.

The second principal type is broadly Na-Cl dominated, with additional ions such as magnesium and bicarbonate. It evolves by gradual evapoconcentration of groundwater in the regolith over the Archaean Basement to the east and southeast of Newman which receives rainfall signature and in which enrichment by interaction between groundwater and leached regolith and fractured granitoid basement is relatively minor. These waters are typically more saline (higher EC and TDS concentration). The alluvial deposits to the southwest of Ophthalmia Dam are similar to the Archaean Basement signatures. Bores belonging to Zone 4 and partly Zone 1 are influenced by these processes.

Since all surface and groundwater flows from the upstream catchment area are channelled into the Ethel Gorge area, the hydrochemical signatures of groundwater in the Ethel Gorge area (Zone 5 bores) represent various mixtures of the two principal signatures. Although Ophthalmia Dam attenuates surface water runoff from the upstream catchment it also supplies water into the groundwater bodies downstream from the dam and influences their hydrochemical character according to the prevailing hydrochemistry of water in the Dam. The enhanced groundwater recharge resulting from the Ophthalmia Dam is likely to be the single most important source of groundwater recharge in the Ethel Gorge.

The hydrochemical nature of the groundwater samples within the Ethel Gorge suggests that the input from the Homestead Creek area (i.e. from the dolomite-fed groundwater area to the west of Newman), or generally from areas to the west of the Ethel Gorge, is consistent, and groundwaters generally preserve their hydrochemical character albeit with higher chloride and sodium proportion than in the Homestead group. It is difficult to establish whether this preservation is due to significant contribution from the Homestead area, or due to the fact that water in Ophthalmia Dam may be not too different in its hydrochemistry to Homestead groundwater.

The surface water chemistry of Ophthalmia Dam is known to vary seasonally, but a large rainfall event will usually result in very low TDS water. The typical water analysis is likely to be similar to rainfall generated runoff sampled in 1982 that indicated that Na-HCO₃ dominated water type was present in Ophthalmia Dam (Clark and Kneeshaw 1982).

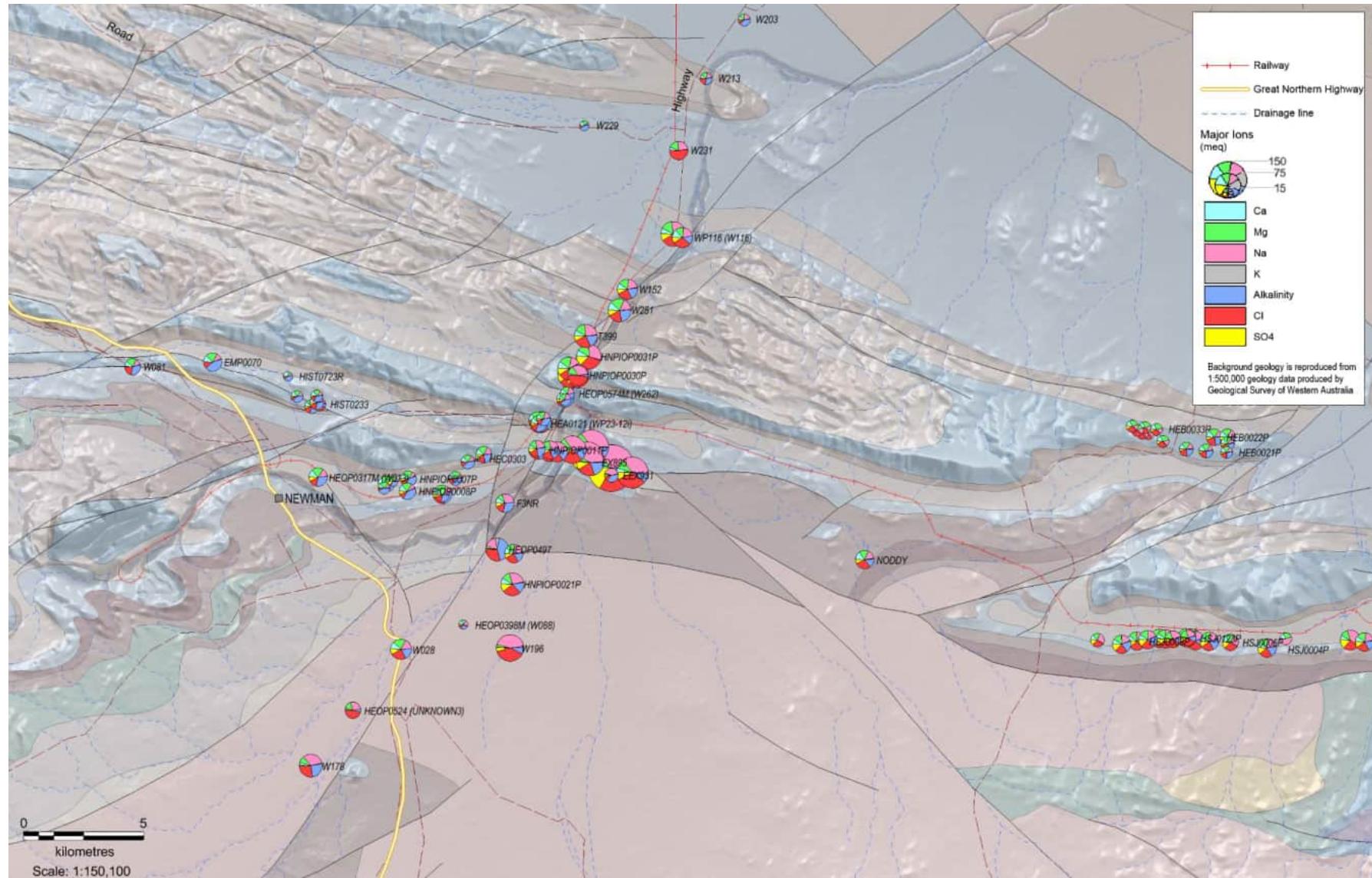


Figure E3: Pie diagrams illustrating distribution of hydrochemical types of groundwater in the area of Ethel Gorge.

Appendix F Stygofauna Records from 2003 to May 2021

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinals Name	Abundance
HEA0126	WP14S	10/02/2011	791702	7418654	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		1
HEA0126	WP14S	15/04/2012	791702	7418654	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEA0126	WP14S	11/02/2012	791702	7418654	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		3
HEA0126	WP14S	15/04/2012	791702	7418654	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		9
HEA0126	WP14S	14/12/2013	791702	7418654	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		1
HEA0126	WP14S	04/11/2010	791702	7418654	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		2
HEA0126	WP14S	15/04/2012	791702	7418654	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		2
HEA0126	WP14S	17/03/2014	791702	7418654	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		100
HEA0126	WP14S	17/03/2014	791702	7418654	50 K	Oligochaeta	Naididae	Naididae indet.		2
HEA0126	WP14S	15/04/2012	791702	7418654	50 K	Nematoda		Nematoda indet.		1
HEA0126	WP14S	14/12/2013	791702	7418654	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	2
HEA0126	WP14S	11/02/2012	791702	7418654	50 K	Ostracoda	Candonidae	Ostracoda indet.		1
HEA0126	WP14S	04/11/2010	791702	7418654	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
HEA0126	WP14S	04/11/2010	791702	7418654	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		1
HEA0126	WP14S	17/03/2014	791702	7418654	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		5
HEOP0417	W107	13/05/2009	792269	7417283	50 K	Amphipoda		Amphipoda indet.		1
HEOP0417	W107	05/11/2010	792269	7417283	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		1
HEOP0417	W107	05/11/2010	792269	7417283	50 K	Ostracoda	Candonidae	Candonopsis tenuis		1
HEOP0417	W107	13/12/2013	792269	7417283	50 K	Ostracoda	Candonidae	Candonopsis tenuis		1
HEOP0417	W107	05/11/2010	792269	7417283	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		3
HEOP0417	W107	18/03/2015	792269	7417283	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		3
HEOP0417	W107	01/04/2009	792269	7417283	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		2
HEOP0417	W107	13/12/2013	792269	7417283	50 K	Amphipoda	Paramelitidae	Chydaekata indet. OB		1
HEOP0417	W107	13/05/2009	792269	7417283	50 K	Copepoda		Copepoda indet.		101 to 500
HEOP0417	W107	02/09/2008	792269	7417283	50 K	Ostracoda	Cyprididae	Cypretta indet.		1
HEOP0417	W107	01/04/2009	792269	7417283	50 K	Ostracoda	Cyprididae	Cypretta seurati		11 to 25
HEOP0417	W107	01/04/2009	792269	7417283	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		51 to 100
HEOP0417	W107	05/11/2010	792269	7417283	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		11
HEOP0417	W107	13/12/2013	792269	7417283	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		4
HEOP0417	W107	18/03/2015	792269	7417283	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		8
HEOP0417	W107	02/09/2008	792269	7417283	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		6 to 10
HEOP0417	W107	05/11/2010	792269	7417283	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		1
HEOP0417	W107	02/09/2008	792269	7417283	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		1
HEOP0417	W107	05/11/2010	792269	7417283	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		1
HEOP0417	W107	10/02/2012	792269	7417283	50 K	Nematoda		Nematoda indet.		1
HEOP0417	W107	01/04/2009	792269	7417283	50 K	Ostracoda	Candonidae	Notocandona indet.		26
HEOP0417	W107	01/04/2009	792269	7417283	50 K	Ostracoda		Ostracoda indet.		2 to 5
HEOP0417	W107	13/05/2009	792269	7417283	50 K	Ostracoda		Ostracoda indet.		26 to 50
HEOP0417	W107	09/02/2011	792269	7417283	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
HEOP0417	W107	18/03/2015	792269	7417283	50 K	Ostracoda: Podocopida	Candonidae	Pilbaracandona ?OB2 (?OST002)		2
HEOP0417	W107	01/04/2009	792269	7417283	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		11
HEOP0417	W107	10/02/2012	792269	7417283	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
HEOP0417	W107	18/03/2015	792269	7417283	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		12
HEOP0425	W115	12/12/2014	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		5
HEOP0425	W115	02/09/2008	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		2 to 5
HEOP0425	W115	08/02/2011	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		4
HEOP0425	W115	12/04/2012	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		17
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		950
HEOP0425	W115	16/03/2014	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		15
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Ostracoda	Candonidae	Candoninae indet.		1
HEOP0425	W115	12/12/2014	793687	7417497	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		1
HEOP0425	W115	12/12/2014	793687	7417497	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		2
HEOP0425	W115	12/04/2012	793687	7417497	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		2
HEOP0425	W115	02/09/2008	793687	7417497	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
HEOP0425	W115	08/02/2011	793687	7417497	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		5

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinials Name	Abundance
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet. OB		2
HEOP0425	W115	16/03/2014	793687	7417497	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet. OB		1
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Isopoda	Microcerberidae	<i>Coxicerberus</i> sp. OB2		1
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopoidae	Cyclopoida indet.		100
HEOP0425	W115	08/02/2011	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops cf. sobprolatus</i>		1
HEOP0425	W115	12/12/2014	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		6
HEOP0425	W115	02/09/2008	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		26 to 50
HEOP0425	W115	08/02/2011	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		5
HEOP0425	W115	12/04/2012	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		200
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		800
HEOP0425	W115	16/03/2014	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		30
HEOP0425	W115	02/09/2008	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobprolatus</i>		26 to 50
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobprolatus</i>		50
HEOP0425	W115	12/12/2014	793687	7417497	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
HEOP0425	W115	16/03/2014	793687	7417497	50 K	Oligochaeta	Naididae	Naididae indet.		1
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		11
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Orbuscyclops westaustraliensis</i>		50
HEOP0425	W115	08/02/2011	793687	7417497	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		14
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1-OB2		1
HEOP0425	W115	08/02/2011	793687	7417497	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		20
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	7
HEOP0425	W115	16/03/2014	793687	7417497	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	8
HEOP0425	W115	12/04/2012	793687	7417497	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OB2_sp. 4 (OP2)		3
HEOP0425	W115	02/09/2008	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		1
HEOP0425	W115	12/04/2012	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		16
HEOP0425	W115	13/12/2013	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		2
HEOP0425	W115	16/03/2014	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		2
HEOP0425	W115	12/04/2012	793687	7417497	50 K	Oligochaeta	Naididae	<i>Pristina</i> sp. OB		2
HEOP0425	W115	16/03/2014	793687	7417497	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		3
A Wall Composite		17/05/2009	791667	7416006	50K	Copepoda		Copepoda indet.		2 to 5
A Wall Composite		17/05/2009	791667	7416006	50K	Isopoda		Isopoda sp2		2 to 5
C Wall Comp		17/05/2009	794971	7415867	50K	Copepoda		Copepoda indet.		11 to 25
D14/7		30/08/2008	790237	7411760	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
EA0170R		05/04/2013	782150	7421164	50K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> sp. Ench6 (=OB_MC)		5
EA0284R		21/03/2008	789511	7419571	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
EA0284R		31/07/2008	789511	7419571	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
EA0284R		13/03/2008	789515	7419577	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	1
EA0285R	W196	15/05/2009	790297	7409115	50 K	Copepoda: Cyclopoida	Cyclopoidae	Cyclopoida indet.		26 to 50
EA0285R	W196	20/04/2017	790297	7409115	50 K	Amphipoda	Paramelitidae	<i>Kruptus</i> sp. JB1 (AMP004)		1
EA0285R	W196	16/03/2015	790297	7409115	50 K	Ostracoda: Podocopida	Candonidae	<i>Notacandona gratia</i>		1
EA0285R	W196	15/12/2013	790297	7409115	50 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		2
EA0285R	W196	18/03/2014	790297	7409115	50 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		1
EA0285R	W196	13/04/2012	790297	7409115	50 K	Ostracoda	Candonidae	<i>Notocandona gratia</i>		1
EA0285R	W196	15/05/2009	790297	7409115	50 K	Oligochaeta		Oligochaeta indet.		51 to 100
EA0285R	W196	16/03/2015	790297	7409115	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Orbuscyclops westaustraliensis</i>		1
EA0285R	W196	15/12/2013	790297	7409115	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Orbuscyclops westaustraliensis</i>		1
EA0285R	W196	18/03/2014	790297	7409115	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
EA0285R	W196	18/03/2014	790297	7409115	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
EA0285R	W196	13/04/2012	790297	7409115	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilus</i> sp. OP1		2
EA0285R	W196	30/08/2008	790297	7409115	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilus</i> indet.		2 to 5
EAP0176		15/03/2008	787887	7420295	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
EAP0176		15/03/2008	787887	7420296	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> indet.		1
EAS0049 / UNKN.REF.OPTH1		25/08/2008	793618	7416591	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		6 to 10

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EAS0049 / UNKN.REF.OPTH1		25/08/2008	793618	7416591	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
EEX0560		08/04/2013	777322	7420891	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	28
EEX0561		11/07/2013	777318	7420790	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> indet.		1
EEX0561		11/07/2013	777318	7420790	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. Phre1 (=OP1)		1
EEX0572		08/04/2013	779699	7420129	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> sp. Ench1		38
EEX0572		11/07/2013	779699	7420129	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> sp. Ench1		1
EEX0573		08/04/2013	779697	7420025	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> indet.		2
EEX917		16/05/2009	793530	7417045	50 K	Amphipoda		Amphipoda indet.		2 to 5
EEX917		25/08/2008	793530	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
EEX917		09/02/2011	793530	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		18
EEX917		8/02/2012	793530	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		2
EEX917		13/12/2013	793530	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		200
EEX917		16/03/2014	793530	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		200
EEX917		12/12/2014	793530	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
EEX917		8/02/2012	793530	7417045	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		5
EEX917		16/03/2014	793530	7417045	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		4
EEX917		25/08/2008	793530	7417045	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		1
EEX917		09/02/2011	793530	7417045	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		1
EEX917		12/04/2012	793530	7417045	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		2
EEX917		13/12/2013	793530	7417045	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet. OB		1
EEX917		16/03/2014	793530	7417045	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet. OB		20
EEX917		16/05/2009	793530	7417045	50 K	Copepoda		Copepoda indet.		101 to 500
EEX917		25/08/2008	793530	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
EEX917		05/11/2010	793530	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		26
EEX917		09/02/2011	793530	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		82
EEX917		8/02/2012	793530	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		65
EEX917		12/04/2012	793530	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		150
EEX917		13/12/2013	793530	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		50
EEX917		16/03/2014	793530	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		100
EEX917		25/08/2008	793530	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
EEX917		25/08/2008	793530	7417045	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> indet.		1
EEX917		25/08/2008	793530	7417045	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> indet.		2 to 5
EEX917		12/04/2012	793530	7417045	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB2		1
EEX917		8/02/2012	793530	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	105
EEX917		12/04/2012	793530	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	300
EEX917		16/05/2009	793530	7417045	50 K	Ostracoda		Ostracoda indet.		1
EEX917		05/11/2010	793530	7417045	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
EEX917		09/02/2011	793530	7417045	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
EEX917		8/02/2012	793530	7417045	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
EEX917		16/03/2014	793530	7417045	50 K	Ostracoda	Candonidae	<i>Pilbaracandona colonia</i>		2
EEX917		8/02/2012	793530	7417045	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		1
EEX917		12/04/2012	793530	7417045	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		1
EEX917		13/12/2013	793530	7417045	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		6
EEX917		16/03/2014	793530	7417045	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		10
EEX917		16/03/2014	793530	7417045	50 K	Ostracoda	Candonidae	<i>Pilbaracandona</i> sp. OB2	<i>Pilbaracandona</i> 'OST002'	2
EEX917		25/08/2008	793530	7417045	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
EEX917		05/11/2010	793530	7417045	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
EEX917		8/02/2012	793530	7417045	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
EEX917		16/03/2014	793530	7417045	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
EEX931		16/03/2014	793528	7417045	50 K	Aphanoneura	Aeolosomatidae	<i>Aeolosoma</i> sp. OB		3
EEX931		13/12/2013	793528	7417045	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
EEX931		02/09/2008	793528	7417045	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		1
EEX931		05/11/2010	793528	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
EEX931		09/02/2011	793528	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	Taxon	WAMinials Name	Abundance
EEX931		8/02/2012	793528	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		3
EEX931		12/04/2012	793528	7417045	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
EEX931		13/05/2021	793528	7417045	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Dussartcycllops</i> sp.		1
EEX931		16/03/2014	793528	7417045	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		3
EEX931		15/12/2014	793528	7417045	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
EEX931		05/11/2010	793528	7417045	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		5
EEX931		09/02/2011	793528	7417045	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		5
EEX931		16/03/2014	793528	7417045	50 K	Oligochaeta	Naididae	Naididae indet.		2
EEX931		13/12/2013	793528	7417045	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		8
EEX931		16/03/2014	793528	7417045	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		6
EEX931		8/02/2012	793528	7417045	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> jane		1
EEX931		8/02/2012	793528	7417045	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris</i> 'COP001'	11
EEX931		12/04/2012	793528	7417045	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris</i> 'COP001'	150
EEX931		13/12/2013	793528	7417045	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
EEX931		16/03/2014	793528	7417045	50 K	Platyhelminthes		Platyhelminthes indet.		1
EEX931		19/04/2017	793528	7417045	50 K					0
EEX931 / Oph May09 UNK 3		02/09/2008	794516	7416624	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
EEX931 / Oph May09 UNK 3		02/09/2008	794516	7416624	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
EEX931 / Oph May09 UNK 3		17/05/2009	794516	7416621	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
EJ0434R		19/03/2008	813071	7417619	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
EJ0434R		19/03/2008	813072	7417620	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		
EKP0056		25/09/2009	770549	7411068	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		11 to 25
EKP0056		21/01/2010	770549	7411068	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
EKP0186		24/09/2009	770553	7411315	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		6 to 10
EKP0186		21/01/2010	770553	7411315	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
EKP0271		21/01/2010	770556	7411370	50 K	Copepoda		Copepoda indet.		6 to 10
EKP0271		24/09/2009	770556	7411370	50 K	Ostracoda		Ostracoda indet.		2 to 5
EMP0054		08/04/2013	779123	7420941	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
EMP0070		09/04/2013	777925	7421025	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		7
EMP0070		11/07/2013	777925	7421025	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		14
EMP0070		11/07/2013	777925	7421025	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		10
EMP0070		11/07/2013	777925	7421025	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		5
EMP0070		09/04/2013	777925	7421025	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3 (gen 2 B13)	Paramelitidae n. Gen. 2 'AMP003'	9
EMP0070		11/07/2013	777925	7421025	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3 (gen 2 B13)	Paramelitidae n. Gen. 2 'AMP003'	6
EMP0070		09/04/2013	777925	7421025	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	1
EMP0070		11/07/2013	777925	7421025	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	5
EMP0070		09/04/2013	777925	7421025	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		18
EMP0070		11/07/2013	777925	7421025	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		100
EMP0139		08/04/2013	779113	7420541	50 K	Bathynellacea	Bathynellidae	<i>Bathynella</i> sp. B11		3
EMP0139		11/07/2013	779113	7420541	50 K	Bathynellacea	Bathynellidae	<i>Bathynella</i> sp. B11		2
EMP0139		08/04/2013	779113	7420541	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		15
EMP0139		11/07/2013	779113	7420541	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		5
EMP0139		08/04/2013	779113	7420541	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		25
EMP0139		11/07/2013	779113	7420541	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		18
EMP0139		08/04/2013	779113	7420541	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> indet.		1
EMP0139		11/07/2013	779113	7420541	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		10
EMP0139		08/04/2013	779113	7420541	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	4
EMP0139		11/07/2013	779113	7420541	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	6
EMP0139		11/07/2013	779113	7420541	50 K	Copepoda: Harpacticoida	Parastenocarididae	<i>Parastenocaris</i> jane		8
EMR0041		04/09/2008	775208	7420882	50 K	Ostracoda	Candonidae	Candonidae indet.		1
EMR0041		04/09/2008	775208	7420882	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
EMR0041		04/09/2008	775208	7420882	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
EMR0041		04/09/2008	775208	7420882	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		2

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinials Name	Abundance
EMR0041		04/09/2008	775208	7420882	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
EX895		12/12/2014	793633	7416841	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		4
EX895		21/11/2009	793633	7416841	50 K	Ostracoda	Candonidae	<i>Candonidae indet.</i>		1
EX895		12/12/2014	793633	7416841	50 K	Amphipoda	Paramelitidae	<i>Chydaekata ? acuminata</i>		1
EX895		21/11/2009	793633	7416841	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		6
EX895		21/11/2009	793633	7416841	50 K	Isopoda	Microceberidae	<i>Coxicerberus sp. OB1</i>	<i>Coxicerberus 'ISO019'</i>	1
EX895		12/12/2014	793633	7416841	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		6
EX895		21/11/2009	793633	7416841	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		48
EX895		12/12/2014	793633	7416841	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
EX895		12/12/2014	793633	7416841	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		2
EX895		21/11/2009	793633	7416841	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae sp. OB_MC</i>		9
EX895		21/11/2009	793633	7416841	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici (B08)</i>	<i>Nitocrella 'COP003'</i>	30
EX895		21/11/2009	793633	7416841	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae indet.</i>		7
EX895		21/11/2009	793633	7416841	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
EX895		21/11/2009	793633	7416841	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		1
EX895		21/11/2009	793633	7416841	50 K	Oligochaeta	Naididae	<i>Pristina sp. OB</i>		1
EX895		21/11/2009	793633	7416841	50 K	Oligochaeta	Naididae	<i>Pristina sp. OB</i>		1
EXR0644		26/11/2008	810294	7410800	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		1
EXR0789		03/04/2009	810013	7410479	51 K	Oligochaeta		<i>Oligochaeta indet.</i>		11 to 25
EXR0979		25/11/2008	808807	7410230	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		2 to 5
EXR0983		25/11/2008	809105	7410261	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		2 to 5
EXR0983		04/04/2009	809098	7410268	51 K	Ostracoda		<i>Ostracoda indet.</i>		1
EXR0984		25/11/2008	809097	7410221	51 K	Ostracoda	Candonidae	<i>Candonopsis indet.</i>		1
EXR1010		24/11/2008	810609	7410205	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		2 to 5
EXR1010		02/04/2009	810607	7410204	51 K	Oligochaeta		<i>Oligochaeta indet.</i>		2 to 5
EXR1343		15/04/2010	765376	7409591	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus Pilbara sp. 2 (PSS)</i>		2 to 5
EXR1343		15/04/2010	765376	7409591	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus Pilbara sp. 2 (PSS)</i>		2 to 5
EXR1542R		24/11/2008	810597	7410107	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		6 to 10
EXR1544R		24/11/2008	811559	7409899	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		101 to 500
EXR1659R		12/04/2010	765289	7408408	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus Pilbara sp. 2 (PSS)</i>		6 to 10
EXR1659R		12/04/2010	765289	7408408	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus Pilbara sp. 2 (PSS)</i>		6 to 10
EXR1659R		20/07/2010	765289	7408408	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus Pilbara sp. 2 (PSS)</i>		6 to 10
EXR1659R		20/07/2010	765289	7408408	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus Pilbara sp. 2 (PSS)</i>		6 to 10
EXR1660R		20/07/2010	765296	7408457	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus Pilbara sp. 2 (PSS)</i>		2 to 5
EXR1660R		20/07/2010	765296	7408457	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus Pilbara sp. 2 (PSS)</i>		2 to 5
EXR1677R		26/11/2008	809550	7410599	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		1
EXR1677R		04/04/2009	809553	7410603	51 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		2
EXR1677R		04/04/2009	809553	7410603	51 K	Oligochaeta		<i>Oligochaeta indet.</i>		26 to 50
EXR1678		26/11/2008	810867	7410480	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		6 to 10
EXR639		25/11/2008	810266	7410151	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		101 to 500
EXR639		25/11/2008	810266	7410151	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		101 to 500
F2A / HEOP0798		14/05/2009	791970	7416640	50 K	Ostracoda		<i>Ostracoda indet.</i>		1
F3 / HEOP0399		31/08/2008	790336	7415083	50 K	Bathynellacea	Parabathynellidae	<i>Atopobathynella indet.</i>		1
F3NR		04/11/2010	790090	7415143	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae sp. OB2 AMP002</i>	<i>Paramelitidae n. Gen. 1 'AMP002'</i>	2
F3NR		15/12/2013	790090	7415143	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		3
F3NR		15/12/2013	790090	7415143	50 K	Bathynellacea	Bathynellidae	<i>Bathynellidae indet.</i>		1
F3NR		22/04/2010	790090	7415143	50 K	Bathynellacea	Parabathynellidae	<i>Billibathynella cassidis</i>		3
F3NR		15/12/2013	790090	7415143	50 K	Bathynellacea	Parabathynellidae	<i>Billibathynella cassidis</i>		1
F3NR		22/04/2010	790090	7415143	50 K	Bathynellacea	Parabathynellidae	<i>Billibathynella indet.</i>		2
F3NR		15/12/2013	790090	7415143	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
F3NR		22/04/2010	790090	7415143	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcyclops varicans</i>		4
F3NR		04/11/2010	790090	7415143	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcyclops varicans</i>		1
F3NR		15/12/2013	790090	7415143	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcyclops varicans</i>		16
F3NR		20/11/2009	790090	7415143	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcyclops varicans</i>		2
F3NR		15/12/2013	790090	7415143	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae indet.</i>		2

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F3NR		20/11/2009	790090	7415143	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB2 AMP002	Paramelitidae n. Gen. 1 'AMP002'	1
F3NR		22/04/2010	790090	7415143	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		300
F3NR		15/12/2013	790090	7415143	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		27
F3NR		20/11/2009	790090	7415143	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		9
F5		17/05/2009	789311	7414640	50 K	Copepoda		Copepoda indet.		6 to 10
F5		17/05/2009	789311	7414640	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
F5		17/05/2009	789311	7414640	50 K	Ostracoda		Ostracoda indet.		2 to 5
FG2201R		26/11/2008	814925	7409615	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
FC2214R		26/11/2008	817324	7409463	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		6 to 10
HEA0117		26/08/2008	791508	7418498	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11 to 25
HEA0121	WP23-12i	21/04/2017	791352	7418337	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		4
HEA0121	WP23-12i	12/05/2021	791352	7418337	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		3
HEA0121	WP23-12i	21/04/2017	791352	7418337	50 K	Oligochaeta	Naididae	Pristina sp. OB		17
HEA0121	WP23-12i	12/11/2020	791352	7418337	50K	Oligochaeta	Naididae	Pristina sp. OB		1
HEA0123	P13S	28/08/2008	791424	7418598	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
HEA0123	P13S	21/04/2010	791424	7418598	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		5
HEA0123	P13S	21/11/2009	791424	7418598	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		2
HEA0123	P13S	28/08/2008	791424	7418598	50 K	Amphipoda	Paramelitidae	Maarrka etheli		1
HEA0123	P13S	21/11/2009	791424	7418598	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	1
HEA0123	P13S	14/12/2013	791424	7418598	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HEA0123	P13S	21/11/2009	791424	7418598	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HEA0123	P13S	21/11/2009	791424	7418598	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HEA0123	P13S	04/11/2010	791424	7418598	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OB2_sp. 4 (OP2)		1
HEA0123	P13S	04/11/2010	791424	7418598	50 K	Ostracoda	Candonidae	<i>Pilbaracandona colonia</i>		2
HEA0123	P13S	21/11/2009	791424	7418598	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		1
HEA0126	WP14S	21/04/2017	791702	7418654	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		4
HEA0126	WP14S	12/05/2021	791702	7418654	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		5
HEA0126	WP14S	21/04/2017	791702	7418654	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		12
HEA0126	WP14S	12/05/2021	791702	7418654	50K	Bathynellacea	Bathynellidae	<i>Pilbaranella</i> sp.		2
HEA0126	WP14S	26/08/2008	791702	7418654	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
HEA0133	P20S	12/05/2021	791605	7418527	50K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		4
HEA0133	P20S	12/12/2014	791605	7418527	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEA0133	P20S	12/05/2021	791605	7418527	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEA0133	P20S	17/03/2014	791605	7418527	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEA0133	P20S	15/04/2012	791605	7418527	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		1
HEA0133	P20S	12/05/2021	791605	7418527	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		16
HEA0133	P20S	20/04/2010	791605	7418527	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		112
HEA0133	P20S	11/02/2012	791605	7418527	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		14
HEA0133	P20S	14/12/2013	791605	7418527	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		6
HEA0133	P20S	17/03/2014	791605	7418527	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		5
HEA0133	P20S	21/11/2009	791605	7418527	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		16
HEA0133	P20S	04/11/2010	791605	7418527	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
HEA0133	P20S	11/02/2012	791605	7418527	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		2
HEA0133	P20S	14/12/2013	791605	7418527	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		2
HEA0133	P20S	17/03/2014	791605	7418527	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		3
HEA0133	P20S	21/11/2009	791605	7418527	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
HEA0133	P20S	12/11/2020	791605	7418527	50K	Amphipoda	Paramelitidae	Maarrka etheli		1
HEA0133	P20S	15/04/2012	791605	7418527	50 K	Nematoda		Nematoda indet.		1
HEA0133	P20S	15/04/2012	791605	7418527	50 K	Ostracoda		Ostracoda indet.		1
HEA0133	P20S	17/03/2014	791605	7418527	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1-OB2		1
HEA0133	P20S	10/02/2011	791605	7418527	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		1
HEA0133	P20S	11/02/2012	791605	7418527	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		1
HEA0133	P20S	12/11/2020	791605	7418527	50K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
HEA0133	P20S	26/08/2008	791605	7418527	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		6
HEA0143		27/08/2008	791781	7418723	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5

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HEA0143		27/08/2008	791781	7418723	50 K	Isopoda		Isopoda indet.		1
HEC0303		17/03/2014	788952	7417003	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
HEC0303		14/12/2013	788952	7417003	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEC0303		18/03/2015	788952	7417003	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		4
HEC0303		17/03/2014	788952	7417003	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcyclops varicans</i>		7
HEC0303		17/03/2014	788952	7417003	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	1
HEOP0317M	W013	15/05/2009	782300	7416227	50 K	Amphipoda		Amphipoda indet.		1
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		2
HEOP0317M	W013	8/02/2012	782300	7416227	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		2
HEOP0317M	W013	12/04/2012	782300	7416227	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEOP0317M	W013	14/12/2013	782300	7416227	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		2
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEOP0317M	W013	20/04/2010	782300	7416227	50 K	Bathynellacea	Bathynellidae	Bathynellidae sp. OB2		1
HEOP0317M	W013	20/04/2010	782300	7416227	50 K	Bathynellacea	Bathynellidae	Bathynellidae sp. OB2		1
HEOP0317M	W013	14/12/2013	782300	7416227	50 K	Ostracoda	Candonidae	Candoninae indet.		1
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Ostracoda	Candonidae	Candoninae indet.		1
HEOP0317M	W013	8/02/2012	782300	7416227	50 K	Ostracoda	Candonidae	<i>Candonopsis tenuis</i>		1
HEOP0317M	W013	09/02/2011	782300	7416227	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		1
HEOP0317M	W013	20/04/2010	782300	7416227	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		80
HEOP0317M	W013	09/02/2011	782300	7416227	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		5
HEOP0317M	W013	8/02/2012	782300	7416227	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		100
HEOP0317M	W013	12/04/2012	782300	7416227	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		200
HEOP0317M	W013	14/12/2013	782300	7416227	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		6
HEOP0317M	W013	20/11/2009	782300	7416227	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		25
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops sp.</i>		2
HEOP0317M	W013	09/02/2011	782300	7416227	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		7
HEOP0317M	W013	8/02/2012	782300	7416227	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB3		1
HEOP0317M	W013	12/04/2012	782300	7416227	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB3		1
HEOP0317M	W013	3/11/2010	782300	7416227	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	1
HEOP0317M	W013	03/11/2010	782300	7416227	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	1
HEOP0317M	W013	14/12/2013	782300	7416227	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		2
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		3
HEOP0317M	W013	20/04/2010	782300	7416227	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		6
HEOP0317M	W013	12/04/2012	782300	7416227	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		2
HEOP0317M	W013	8/02/2012	782300	7416227	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris</i> 'COP001'	3
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris</i> 'COP001'	1
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris</i> 'COP001'	1
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Acarina	Pezidae	<i>Peza</i> sp. OB	<i>Peza</i> 'ACA001'	1
HEOP0317M	W013	09/02/2011	782300	7416227	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HEOP0317M	W013	16/03/2014	782300	7416227	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HEOP0317M	W013	18/03/2015	782300	7416227	50 K	Ostracoda: Podocopida	Candonidae	<i>Pilbaracandona</i> sp. OB2	<i>Pilbaracandona</i> 'OST002'	1
HEOP0317M	W013	20/04/2010	782300	7416227	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
HEOP0317M	W013	20/04/2010	782300	7416227	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
HEOP0387	W078	19/04/2017	-23.327870	119.854900	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
HEOP0387	W078	19/04/2017	-23.327870	119.854900	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		5
HEOP0387	W078	19/04/2017	-23.327870	119.854900	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
HEOP0388	W79D	19/03/2020	790859	7417267	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		9
HEOP0388	W79D	15/12/2014	792753	7420767	50 K	Amphipoda	Paramelitidae	Paramelitidae-indet.		1
HEOP0388	W79D	19/03/2020	790859	7417267	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Pilbaracyclops supersensus</i>		2
HEOP0388	W79D	8/02/2012	790927	7417327	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Ostracoda	Candonidae	Candoninae indet.		4
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Ostracoda	Candonidae	Candoninae indet.		23
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Ostracoda	Candonidae	Candoninae indet.		1
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Ostracoda	Candonidae	<i>Candonopsis tenuis</i>		4

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinials Name	Abundance
HEOP0388	W79D	19/04/2017	790859	7417267	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		3
HEOP0388	W79D	19/03/2020	790859	7417267	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEOP0388	W79D	13/11/2020	790859	7417267	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		2
HEOP0388	W79D	8/02/2012	790927	7417327	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		3
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		3
HEOP0388	W79D	15/12/2014	792753	7420767	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEOP0388	W79D	22/04/2010	790859	7417267	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		1
HEOP0388	W79D	08/02/2011	790859	7417267	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		1
HEOP0388	W79D	22/04/2010	790927	7417327	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		1
HEOP0388	W79D	8/02/2011	790927	7417327	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		1
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Cyclopoida indet.</i>		1
HEOP0388	W79D	08/02/2011	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops cf. sobeprolatus</i>		2
HEOP0388	W79D	8/02/2011	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops cf. sobeprolatus</i>		2
HEOP0388	W79D	22/04/2010	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		17
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		1
HEOP0388	W79D	08/02/2011	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		16
HEOP0388	W79D	19/04/2017	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		30
HEOP0388	W79D	11/12/2019	790859	7417267	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2
HEOP0388	W79D	12/05/2021	790859	7417267	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		12
HEOP0388	W79D	22/04/2010	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		17
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		1
HEOP0388	W79D	8/02/2011	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		6
HEOP0388	W79D	9/02/2011	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		10
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		50
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		34
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		4
HEOP0388	W79D	15/12/2014	792753	7420767	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		19
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops sobeprolatus</i>		2
HEOP0388	W79D	09/02/2011	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops sobeprolatus</i>		12
HEOP0388	W79D	19/04/2017	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
HEOP0388	W79D	03/09/2008	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		2
HEOP0388	W79D	9/02/2011	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		12
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		3
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		2
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae sp. OB_MC</i>		1
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae sp. OB_MC</i>		6
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		4
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		2
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		2
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
HEOP0388	W79D	22/04/2010	790859	7417267	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0388	W79D	11/12/2019	790859	7417267	50K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0388	W79D	13/11/2020	790859	7417267	50K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0388	W79D	22/04/2010	790927	7417327	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0388	W79D	08/02/2011	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcycllops varicans</i>		1
HEOP0388	W79D	8/02/2011	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcycllops varicans</i>		1
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcycllops varicans</i>		1
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Oligochaeta	Naididae	<i>Naididae indet.</i>		1
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Oligochaeta	Naididae	<i>Naididae indet.</i>		1

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMINALS Name	Abundance
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	3
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	3
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	1
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Ostracoda	Candonidae	<i>Origocandona ?inanitas</i>		1
HEOP0388	W79D	22/04/2010	790859	7417267	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		11
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		4
HEOP0388	W79D	09/02/2011	790859	7417267	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		9
HEOP0388	W79D	19/04/2017	790859	7417267	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		4
HEOP0388	W79D	12/05/2021	790859	7417267	50K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		1
HEOP0388	W79D	22/04/2010	790927	7417327	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		11
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		4
HEOP0388	W79D	8/02/2011	790927	7417327	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		1
HEOP0388	W79D	9/02/2011	790927	7417327	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		8
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		2
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		11
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		1
HEOP0388	W79D	19/03/2020	790859	7417267	50K	Ostracoda		Ostracoda indet.		1
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Ostracoda	Candonidae	Ostracoda indet.		4
HEOP0388	W79D	22/04/2010	790859	7417267	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		6
HEOP0388	W79D	08/02/2011	790859	7417267	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
HEOP0388	W79D	09/02/2011	790859	7417267	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
HEOP0388	W79D	11/12/2019	790859	7417267	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
HEOP0388	W79D	19/03/2020	790859	7417267	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
HEOP0388	W79D	12/05/2021	790859	7417267	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
HEOP0388	W79D	03/09/2008	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		2 to 5
HEOP0388	W79D	22/04/2010	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		6
HEOP0388	W79D	8/02/2011	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
HEOP0388	W79D	9/02/2011	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		3
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1-OB2		1
HEOP0388	W79D	8/02/2012	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3	Paramelitidae n. Gen. 2 'AMP003'	2
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3	Paramelitidae n. Gen. 2 'AMP003'	4
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3	Paramelitidae n. Gen. 2 'AMP003'	16
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3	Paramelitidae n. Gen. 2 'AMP003'	14
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		1
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> jane		1
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> jane		1
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris</i> 'COP001'	1
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Pescecylops pilbaricus</i>		3
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	3
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	3
HEOP0388	W79D	22/11/2009	790859	7417327	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	2
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		5
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		5
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		2
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OP1		5
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		1
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		1
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		4
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		3
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		40
HEOP0388	W79D	19/04/2017	790859	7417267	50 K	Ostracoda	Candonidae	<i>Pilbaracandona nr temporaria</i>		3
HEOP0388	W79D	13/12/2013	790859	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Pilbaracyclops supersensus</i>		3
HEOP0388	W79D	15/03/2014	790859	7417327	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Pilbaracyclops supersensus</i>		4
HEOP0388	W79D	15/12/2014	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Pilbaracyclops supersensus</i>		1

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	Taxon	WAMinials Name	Abundance
HEOP0388	W79D	19/04/2017	790859	7417267	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		2
HEOP0388	W79D	12/05/2021	790859	7417267	50K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		3
HEOP0388	W79D	19/04/2017	790859	7417267	50 K	Bathynellacea	Bathynellidae	Pilbaranella ethelensis		1
HEOP0388	W79D	19/04/2017	790859	7417267	50 K	Oligochaeta	Naididae	Pristina sp. OB		2
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Oligochaeta	Naididae	Pristina sp. OB		1
HEOP0388	W79D	22/04/2010	790859	7417267	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
HEOP0388	W79D	05/11/2010	790859	7417267	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		6
HEOP0388	W79D	08/02/2011	790859	7417267	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		3
HEOP0388	W79D	11/12/2019	790859	7417267	50K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
HEOP0388	W79D	12/05/2021	790859	7417267	50K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
HEOP0388	W79D	13/11/2020	790859	7417267	50K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
HEOP0388	W79D	22/04/2010	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		4
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
HEOP0388	W79D	8/02/2011	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
HEOP0388	W79D	9/02/2011	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
HEOP0388	W79D	12/04/2012	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		3
HEOP0388	W79D	13/12/2013	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		6
HEOP0388	W79D	15/03/2014	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
HEOP0388	W79D	15/12/2014	792753	7420767	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
HEOP0388	W79D	15/12/2014	792753	7420767	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
HEOP0388	W79D	03/09/2008	790927	7417327	50 K	Isopoda	Tainisopidae	Pygolabis indet.		1
HEOP0388	W79D	5/11/2010	790927	7417327	50 K	Isopoda	Stenoniscidae	Stenoniscidae? sp. OB		1
HEOP0398M	W088	17/05/2009	788362	7410086	50 K	Bathynellacea		Bathynellacea indet.		26 to 50
HEOP0398M	W088	9/02/2012	788362	7410086	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEOP0398M	W088	15/12/2013	788362	7410086	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		7
HEOP0398M	W088	18/03/2014	788362	7410086	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		16
HEOP0398M	W088	19/03/2015	788362	7410086	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		17
HEOP0398M	W088	17/05/2009	788362	7410086	50 K	Copepoda		Copepoda indet.		11 to 25
HEOP0398M	W088	12/04/2012	788362	7410086	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		1
HEOP0398M	W088	15/12/2013	788362	7410086	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cf. sobeprolatus		1
HEOP0398M	W088	29/08/2008	788363	7410083	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		1
HEOP0398M	W088	18/03/2014	788362	7410086	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		8
HEOP0398M	W088	20/04/2017	788362	7410086	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		2
HEOP0398M	W088	11/05/2021	788363	7410082	50K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		2
HEOP0398M	W088	19/03/2015	788362	7410086	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		4
HEOP0398M	W088	29/08/2008	788363	7410083	50 K	Oligochaeta	Phreodrilidae	Insulodrilus WA31		51 to 100
HEOP0398M	W088	11/05/2021	788363	7410082	50K	Bathynellacea	Bathynellidae	Pilbaranella ethelensis		20
HEOP0398M	W088	12/04/2012	788362	7410086	50 K	Bathynellacea	Bathynellidae	Pilbaranella ethelensis		27
HEOP0417	W107	19/04/2017	792269	7417283	50K	Amphipoda	Paramelitidae	Chydaekata acuminata		3
HEOP0417	W107	18/03/2020	792269	7417283	50K	Amphipoda	Paramelitidae	Chydaekata acuminata		1
HEOP0417	W107	19/04/2017	792269	7417283	50K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops sobeprolatus		1
HEOP0417	W107	12/05/2021	792269	7417283	50K	Ostracoda	Candonidae	Origocandona 'BOS099'		1
HEOP0417	W107	18/03/2020	792269	7417283	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
HEOP0417	W107	19/04/2017	792269	7417283	50K	Ostracoda	Candonidae	Pilbaracandona colonia		2
HEOP0417	W107	12/05/2021	792269	7417283	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		1
HEOP0417	W107	19/04/2017	792269	7417283	50K	Isopoda	Tainisopidae	Pygolabis humphreysi		9
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		90
HEOP0425	W115	8/02/2012	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		5
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		7
HEOP0425	W115	8/02/2012	793687	7417497	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		3
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		3
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		2
HEOP0425	W115	8/02/2012	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cf. sobeprolatus		12
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		255

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HEOP0425	W115	04/11/2010	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		10
HEOP0425	W115	8/02/2012	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		48
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		41
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		30
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		2
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Orbuscyclops westaustraliensis</i>		15
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		5
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		3
HEOP0425	W115	04/11/2010	793687	7417497	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		9
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		10
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Acarina	Pezidae	<i>Penza sp. OB</i>	<i>Penza 'ACA001'</i>	8
HEOP0425	W115	8/02/2012	793687	7417497	50 K	Acarina	Pezidae	<i>Penza sp. OB</i>	<i>Penza 'ACA001'</i>	3
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Acarina	Pezidae	<i>Penza sp. OB</i>	<i>Penza 'ACA001'</i>	5
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		7
HEOP0425	W115	8/02/2012	793687	7417497	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OB2_sp. 4 (OP2)		1
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona colonia</i>		2
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona colonia</i>		2
HEOP0425	W115	21/04/2010	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		7
HEOP0425	W115	04/11/2010	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		7
HEOP0425	W115	8/02/2012	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		7
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		4
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Oligochaeta	Naididae	<i>Pristina sp. OB</i>		1
HEOP0425	W115	21/11/2009	793687	7417497	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
HEOP0425	W115	19/03/2020	793687	7417497	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		4
HEOP0425	W115	19/03/2020	793687	7417497	50K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		1
HEOP0425	W115	19/04/2017	793687	7417497	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		2
HEOP0425	W115	11/12/2019	793687	7417497	50K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		15
HEOP0425	W115	19/04/2017	793687	7417497	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEOP0425	W115	19/03/2020	793687	7417497	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEOP0425	W115	13/05/2021	793687	7417497	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEOP0425	W115	11/11/2020	793687	7417497	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
HEOP0425	W115	19/04/2017	793687	7417497	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		55
HEOP0425	W115	11/12/2019	793687	7417497	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		9
HEOP0425	W115	13/05/2021	793687	7417497	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2
HEOP0425	W115	19/04/2017	793687	7417497	50 K	Acarina	Pezidae	<i>Penza sp. OB</i>	<i>Penza 'ACA001'</i>	1
HEOP0425	W115	19/03/2020	793687	7417497	50K	Acarina	Pezidae	<i>Penza sp. OB</i>	<i>Penza 'ACA001'</i>	1
HEOP0425	W115	19/04/2017	793687	7417497	50K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OB2_sp. 4 (OP2)		2
HEOP0425	W115	19/04/2017	793687	7417497	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		2
HEOP0425	W115	11/12/2019	793687	7417497	50K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		2
HEOP0425	W115	19/04/2017	793687	7417497	50 K	Oligochaeta	Naididae	<i>Pristina sp. OB</i>		2
HEOP0425	W115	11/12/2019	793687	7417497	50K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
HEOP0425	W115	11/12/2019	793687	7417497	50K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
HEOP0425	W115	19/03/2020	793687	7417497	50K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		3
HEOP0504M		13/05/2021	793121	7420458	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		10
HEOP0504M	W193D	18/04/2017	793121	7420458	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
HEOP0504M	W193D	18/04/2017	793121	7420458	50K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		44
HEOP0504M	W193D	18/04/2017	793121	7420458	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Mesocyclops brooksi</i>		12
HEOP0504M	W193D	18/04/2017	793121	7420458	50K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		1
HEOP0524	UNKNOWN3	20/04/2017	-23.426490	119.776960	50K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OP1		2
HEOP0524 (UNKNOWN3)	Unknown 3	11/12/2019	783762	7406531	50K	Amphipoda	Paramelitidae	Paramelitidae sp. OB2 AMP002		1
HEOP0524 (UNKNOWN3)	Unknown 3	18/03/2020	783762	7406531	50K	Amphipoda	Paramelitidae	Paramelitidae sp. OB2 AMP002		1
HEOP0524 (UNKNOWN3)	Unknown 3	11/12/2014	783763	7406531	50 K	Amphipoda	Paramelitidae	Paramelitidae-indet.		2
HEOP0524 (UNKNOWN3)	Unknown 3	16/03/2015	783763	7406531	50 K	Amphipoda	Paramelitidae	Paramelitidae-indet.		2
HEOP0524 (UNKNOWN3)	Unknown 3	11/12/2014	783763	7406531	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		10

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HEOP0524 (UNKNOWN3)	Unknown 3	16/03/2015	783763	7406531	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		2
HEOP0524 (UNKNOWN3)	Unknown 3	12/04/2012	783763	7406531	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
HEOP0524 (UNKNOWN3)	Unknown 3	18/03/2014	783763	7406531	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
HEOP0524 (UNKNOWN3)	Unknown 3	15/12/2013	783763	7406531	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1-OB2		3
HEOP0524 (UNKNOWN3)	Unknown 3	12/04/2012	783763	7406531	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris indet.		2
HEOP0524 (UNKNOWN3)	Unknown 3	15/12/2013	783763	7406531	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris indet.		1
HEOP0524 (UNKNOWN3)	Unknown 3	31/08/2008	783763	7406531	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		26 to 50
HEOP0524 (UNKNOWN3)	Unknown 3	15/12/2013	783763	7406531	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		10
HEOP0524 (UNKNOWN3)	Unknown 3	18/03/2014	783763	7406531	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		3
HEOP0524 (UNKNOWN3)	Unknown 3	9/02/2012	783763	7406531	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OP1		2
HEOP0524 (UNKNOWN3)	Unknown 3	12/04/2012	783763	7406531	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OP1		40
HEOP0524 (UNKNOWN3)	Unknown 3	11/12/2019	783762	7406531	50K	Haplotaxida	Naididae	Pristina sp. OB		1
HEOP0574M	W262	18/03/2020	792677	7419694	50K	Amphipoda	Paramelitidae	Paramelitidae sp. OB2 AMP002		8
HEOP0574M	W262	13/05/2009	792677	7419694	50 K	Amphipoda		Amphipoda indet.		11 to 25
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Amphipoda		Amphipoda indet.		2
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		20
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		1
HEOP0574M	W262	17/03/2015	792677	7419694	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		2
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		2
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Ostracoda	Candonidae	Areacandona indet.		1
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		8
HEOP0574M	W262	17/03/2015	792677	7419694	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Bathynellacea	Bathynellidae	Bathynellidae sp. OB2		1
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Bathynellacea	Bathynellidae	Bathynellidae sp. OB2		2
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Bathynellacea	Parabathynellidae	Billibathynella sp. OB1	Billibathynella 'SYN001'	1
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Bathynellacea	Parabathynellidae	Brevisomabathynella indet.		1
HEOP0574M	W262	01/04/2009	792677	7419694	50 K	Ostracoda	Candonidae	Candonidae indet.		1
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Ostracoda	Candonidae	Candonidae indet.		1
HEOP0574M	W262	5/11/2010	792677	7419694	50 K	Ostracoda	Candonidae	Candoninae indet.		1
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Ostracoda	Candonidae	Candoninae indet.		1
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		20
HEOP0574M	W262	13/12/2014	792677	7419694	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		1
HEOP0574M	W262	11/12/2019	792677	7419694	50K	Amphipoda	Paramelitidae	Chydaekata acuminata		1
HEOP0574M	W262	14/05/2021	792677	7419694	50K	Amphipoda	Paramelitidae	Chydaekata acuminata		22
HEOP0574M	W262	02/09/2008	792677	7419694	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		2
HEOP0574M	W262	13/05/2009	792677	7419694	50 K	Copepoda		Copepoda indet.		11 to 25
HEOP0574M	W262	01/04/2009	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopidae indet.		6 to 10
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopidae indet.		25
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopidae indet.		70
HEOP0574M	W262	08/02/2011	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cf. sobeprolatus		13
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cockingi		15
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cockingi		6
HEOP0574M	W262	14/05/2021	792677	7419694	50K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cockingi		2
HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		2
HEOP0574M	W262	08/02/2011	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		8
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		5
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		85
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		60
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		60
HEOP0574M	W262	13/12/2014	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		10
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		1
HEOP0574M	W262	14/05/2021	792677	7419694	50K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		9
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		9
HEOP0574M	W262	17/03/2015	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		18

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HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		65
HEOP0574M	W262	13/12/2014	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
HEOP0574M	W262	11/12/2019	792677	7419694	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
HEOP0574M	W262	17/03/2015	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		19
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		2
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		5
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		4
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Copepoda: Harpacticoida		Harpacticoida indet.		1
HEOP0574M	W262	02/09/2008	792677	7419694	50 K	Isopoda		Isopoda indet.		26 to 50
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		2
HEOP0574M	W262	14/05/2021	792677	7419694	50K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		2
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0574M	W262	10/11/2020	792677	7419694	50K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Pescecylops pilbaricus</i>		1
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Nematoda		Nematoda indet.		2
HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Ostracoda	Candonidae	<i>Notacandona sp. OB1</i>		1
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Ostracoda	Candonidae	<i>Notocandona</i> indet.		1
HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		3
HEOP0574M	W262	08/02/2011	792677	7419694	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		10
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		3
HEOP0574M	W262	11/12/2019	792677	7419694	50K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		1
HEOP0574M	W262	13/05/2009	792677	7419694	50 K	Ostracoda		Ostracoda indet.		26 to 50
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Ostracoda		Ostracoda indet.		3
HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Ostracoda		Ostracoda sp. UNK3b		1
HEOP0574M	W262	08/02/2011	792677	7419694	50 K	Ostracoda		<i>Ostracoda</i> sp. UNK3b		1
HEOP0574M	W262	08/02/2011	792677	7419694	50 K	Ostracoda		<i>Ostracoda</i> sp. UNK9		1
HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		8
HEOP0574M	W262	08/02/2011	792677	7419694	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		8
HEOP0574M	W262	11/12/2019	792677	7419694	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		7
HEOP0574M	W262	14/05/2021	792677	7419694	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		17
HEOP0574M	W262	10/11/2020	792677	7419694	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		6
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB1-OB2		3
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB1-OB2		18
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB2 AMP002		1
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB3	<i>Paramelitidae</i> n. Gen. 2 'AMP003'	1
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB3	<i>Paramelitidae</i> n. Gen. 2 'AMP003'	4
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB3	<i>Paramelitidae</i> n. Gen. 2 'AMP003'	9
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB3	<i>Paramelitidae</i> n. Gen. 2 'AMP003'	3
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB3	<i>Paramelitidae</i> n. Gen. 2 'AMP003'	22
HEOP0574M	W262	17/03/2015	792677	7419694	50 K	Amphipoda	Paramelitidae	Paramelitidae-indet.		1
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		1
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> jane		1
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris</i> 'COP001'	1
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	1
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Ostracoda	Candonidae	<i>Pilbaracandona</i> ?temporaria		1
HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Ostracoda	Candonidae	<i>Pilbaracandona</i> colonia		2
HEOP0574M	W262	8/02/2011	792677	7419694	50 K	Ostracoda	Candonidae	<i>Pilbaracandona</i> colonia		1
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Ostracoda	Candonidae	<i>Pilbaracandona</i> colonia		7
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Ostracoda	Candonidae	<i>Pilbaracandona</i> colonia		15

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HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		14
HEOP0574M	W262	13/12/2014	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		6
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		8
HEOP0574M	W262	14/05/2021	792677	7419694	50K	Ostracoda	Candonidae	Pilbaracandona colonia		34
HEOP0574M	W262	10/11/2020	792677	7419694	50K	Ostracoda	Candonidae	Pilbaracandona colonia		1
HEOP0574M	W262	11/12/2019	792677	7419694	50K	Ostracoda	Candonidae	Pilbaracandona colonia		3
HEOP0574M	W262	17/03/2015	792677	7419694	50 K	Ostracoda: Podocopida	Candonidae	Pilbaracandona colonia		5
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		4
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		4
HEOP0574M	W262	01/04/2009	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		1
HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		4
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		1
HEOP0574M	W262	13/12/2013	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		2
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		8
HEOP0574M	W262	14/05/2021	792677	7419694	50K	Ostracoda	Candonidae	Pilbaracandona eberhardi		1
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		6
HEOP0574M	W262	05/11/2010	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		3
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		1
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		3
HEOP0574M	W262	22/11/2009	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		2
HEOP0574M	W262	8/02/2011	792677	7419694	50 K	Ostracoda	Candonidae	Pilbaracandona sp. OB1	Pilbaracandona 'OST001'	1
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		2
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		20
HEOP0574M	W262	17/03/2015	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		6
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Bathynellacea	Bathynellidae	Pilbaranella sp. B		14
HEOP0574M	W262	18/03/2020	792677	7419694	50K	Platyhelminthes		Platyhelminthes indet.		17
HEOP0574M	W262	17/03/2015	792677	7419694	50 K	Platyhelminthes		Platyhelminthes indet.		1
HEOP0574M	W262	5/11/2010	792677	7419694	50 K	Platyhelminthes		Platyhelminthes indet.		30
HEOP0574M	W262	11/04/2012	792677	7419694	50 K	Platyhelminthes		Platyhelminthes indet.		2
HEOP0574M	W262	02/09/2008	792677	7419694	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		6
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
HEOP0574M	W262	8/02/2012	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Thermocyclops aberrans		3
HEOP0574M	W262	18/04/2017	792677	7419694	50 K	Copepoda: Cyclopoida	Cyclopidae	Thermocyclops aberrans		2
HEOP0574M	W262	15/03/2014	792677	7419694	50 K	Platyhelminthes		Turbellaria indet.		6
HHS0019M		07/04/2013	780296	7420383	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	2
HHS0019M		11/07/2013	780296	7420383	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	6
HHS0019M		11/07/2013	780296	7420383	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HHS0019M		11/07/2013	780296	7420383	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		6
HHS0032		11/07/2013	778530	7421164	50 K	Bathynellacea	Bathynellidae	Bathynella sp. B12		4
HHS0032		11/07/2013	778530	7421164	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		13
HHS0032		11/07/2013	778530	7421164	50 K	Copepoda: Harpacticoida	Parastenocarididae	Parastenocaris indet.		3
HHS0032		11/07/2013	778530	7421164	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HHS0035M		08/04/2013	779148	7421337	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	1
HHS0037M		08/04/2013	778555	7421570	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		25
HIST0723R		19/03/2015	782348	7419260	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
HIST0723R		19/03/2015	782348	7419260	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		7
HIST0723R		19/03/2015	782348	7419260	50 K	Copepoda: Cyclopoida	Cyclopidae	Pescecylops pilbaricus		1
HIST0723R		19/03/2015	782348	7419260	50 K	Copepoda: Harpacticoida	Parastenocarididae	Parastenocaris 'hooki'		4
HST0032		13/07/2013	782487	7420486	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		8
HST0032		13/07/2013	782487	7420486	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	1
HST0071R		10/07/2013	782646	7419261	50 K	Bathynellacea	Bathynellidae	Bathynella sp. B11		1
HST0071R		10/07/2013	782646	7419261	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		12
HST0071R		10/07/2013	782646	7419261	50 K	Oligochaeta	Enchytraeidae	Enchytraeus indet.		1
HST0071R		10/07/2013	782646	7419261	50 K	Copepoda: Harpacticoida	Parastenocarididae	Parastenocaris indet.		1
HST0098R		07/04/2013	782049	7420020	50 K	Oligochaeta	Enchytraeidae	Enchytraeus sp. Ench1		4

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HST0130R		11/07/2013	781757	7420371	50 K	Bathynellacea	Bathynellidae	<i>Bathynella</i> sp. B11		1
HST0130R		07/04/2013	781757	7420371	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		3
HST0133R		07/04/2013	781447	7420223	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	1
HST0186R		07/04/2013	782349	7419331	50 K	Bathynellacea	Bathynellidae	<i>Bathynella</i> sp. B11		4
HST0186R		10/07/2013	782349	7419331	50 K	Bathynellacea	Bathynellidae	<i>Bathynella</i> sp. B11		28
HST0186R		10/07/2013	782349	7419331	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		4
HST0186R		10/07/2013	782349	7419331	50 K	Amphipoda	Paramelitidae	<i>Kruptus</i> sp. JB1 (AMP004)	Kruptus AMP004	2
HST0186R		07/04/2013	782349	7419331	50 K	Ostracoda		Ostracoda indet.		1
HST0186R		07/04/2013	782349	7419331	50 K	Copepoda: Harpacticoida	Parastenocarididae	<i>Parastenocaris</i> sp. OB1 (B02)	Parastenocaris 'COP001'	4
HST0186R		10/07/2013	782349	7419331	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. Phre1 (=OP1)		6
HST0186R		10/07/2013	782349	7419331	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		2
HST0205D		07/04/2013	782946	7419360	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> indet.		1
HST0212D		07/04/2013	782647	7419322	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> indet.		6
HST0216D		07/04/2013	782350	7420168	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> sp. Ench1		30
HST0216D		12/07/2013	782350	7420168	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> sp. Ench1		2
HST0217D		12/07/2013	782039	7419180	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
HST0907R		19/03/2015	782250	7419327	50 K	Bathynellacea	Bathynellidae	<i>Bathynellidae</i> indet.		5
HST0907R		19/03/2015	782250	7419327	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		8
JUMP UP		11/02/2012	203820	7379107	51 K	Ostracoda	Cyprididae	Cyprididae indet.		3
Monit Point		13/12/2013	794519	7416613	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		60
Monit Point		16/03/2014	794519	7416613	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		100
Monit Point		13/12/2013	794519	7416613	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris indet.		2
Monit Point		13/12/2013	794519	7416613	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	Parastenocaris 'COP001'	1
Ninga		21/05/2009	805672	7405445	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		11 to 25
Ninga		21/05/2009	805672	7405445	50 K	Oligochaeta	Naididae	Naididae indet.		1
NODDY		13/04/2012	805054	7412794	50 K	Aphanoneura	Aeolosomatidae	<i>Aeolosoma</i> indet.		29
NODDY		13/12/2013	805054	7412794	50 K	Aphanoneura	Aeolosomatidae	<i>Aeolosoma</i> sp. OB		2
NODDY		13/04/2012	805054	7412794	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		2
NODDY		13/12/2013	805054	7412794	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		4
NODDY		21/05/2009	805054	7412794	50 K	Ostracoda	Cyprididae	<i>Cypretta vidua</i>		26 to 50
NODDY		13/04/2012	805054	7412794	50 K	Ostracoda	Cyprididae	Cyprididae indet.		4
NODDY		13/12/2013	805054	7412794	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		2
NODDY		10/02/2012	805054	7412794	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		10
NODDY		13/04/2012	805054	7412794	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		47
NODDY		13/04/2012	805054	7412794	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Mesocyclops brooksi</i>		1
NODDY		10/02/2012	805054	7412794	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcyclops varicans</i>		1
NODDY		13/04/2012	805054	7412794	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcyclops varicans</i>		3
NODDY		13/04/2012	805054	7412794	50 K	Nematoda		Nematoda indet.		2
NODDY		21/05/2009	805054	7412794	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
NONE/OB25P1UNK		29/08/2008	785566	7417334	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		2
OB23REG1		19/03/2020	791423	7417419	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2
OB23REG1		15/03/2014	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Anzyclops</i> sp. OB		1
OB23REG1		09/02/2011	791423	7417419	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		2
OB23REG1		8/02/2012	791423	7417419	50 K	Bathynellacea	Bathynellidae	<i>Bathynellidae</i> indet.		1
OB23REG1		15/03/2014	791423	7417419	50 K	Bathynellacea	Bathynellidae	<i>Bathynellidae</i> indet.		1
OB23REG1		09/02/2011	791423	7417419	50 K	Bathynellacea	Bathynellidae	<i>Bathynellidae</i> sp. OB1		9
OB23REG1		15/03/2014	791423	7417419	50 K	Ostracoda	Candonidae	Candoninae indet.		1
OB23REG1		28/08/2008	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		26 to 50
OB23REG1		05/11/2010	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		8
OB23REG1		09/02/2011	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		36
OB23REG1		8/02/2012	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		30
OB23REG1		12/04/2012	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		80
OB23REG1		13/12/2013	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		4
OB23REG1		15/03/2014	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
OB23REG1		19/04/2017	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		40

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	Taxon	WAMinials Name	Abundance
OB23REG1		11/12/2019	791423	7417419	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		6
OB23REG1		12/05/2021	791423	7417419	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		120
OB23REG1		19/03/2015	791423	7417419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		8
OB23REG1		13/12/2013	791423	7417419	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		3
OB23REG1		15/03/2014	791423	7417419	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		5
OB23REG1		19/04/2017	791423	7417419	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
OB23REG1		05/11/2010	791423	7417419	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		13
OB23REG1		12/04/2012	791423	7417419	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB4		1
OB23REG1		05/11/2010	791423	7417419	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		104
OB23REG1		09/02/2011	791423	7417419	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		17
OB23REG1		13/12/2013	791423	7417419	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		2
OB23REG1		15/03/2014	791423	7417419	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		3
OB23REG1		19/04/2017	791423	7417419	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		49
OB23REG1		13/12/2013	791423	7417419	50 K	Nematoda		Nematoda indet.		1
OB23REG1		19/03/2015	791423	7417419	50 K	Nematoda		Nematoda indet.		1
OB23REG1		19/04/2017	791423	7417419	50 K	Copepoda: Harpacticoida	Parastenocarididae	<i>Parastenocaris jane</i>		5
OB23REG1		05/11/2010	791423	7417419	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		38
OB23REG1		8/02/2012	791423	7417419	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OB4		4
OB23REG1		19/04/2017	791423	7417419	50 K	Bathynellacea	Bathynellidae	<i>Pilbaranella ethelensis</i>		6
OB23REG1		05/11/2010	791423	7417419	50 K	Oligochaeta	Naididae	<i>Pristina</i> sp. OB		36
OB23REG1		09/02/2011	791423	7417419	50 K	Oligochaeta	Naididae	<i>Pristina</i> sp. OB		21
OB23REG1		8/02/2012	791423	7417419	50 K	Oligochaeta	Naididae	<i>Pristina</i> sp. OB		10
OB23REG1		12/04/2012	791423	7417419	50 K	Oligochaeta	Naididae	<i>Pristina</i> sp. OB		7
OB23REG1		8/02/2012	791423	7417419	50 K	Isopoda	Stenoniscidae	Stenoniscidae? sp. OB		1
OB25PH1		23/08/2008	788417	7416817	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
OB25PH1		23/08/2008	788417	7416817	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> spB		2 to 5
OB29SEPT093		20/01/2010	775350	7411133	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
OB35SEPT095		27/09/2009	770948	7411056	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
OB35SEPT096		27/09/2009	770946	7411106	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		11 to 25
OB35SEPT096		21/01/2010	770946	7411106	50 K	Oligochaeta		Oligochaeta indet.		1
Oph May09 UNK W196		15/05/2009	790269	7409124	50 K	Ostracoda		Ostracoda indet.		1
Ophthalmia		21/05/2009	797746	7412644	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
Ophthalmia		21/05/2009	797746	7412644	50 K	Copepoda: Harpacticoida	Parastenocarididae	<i>Parastenocaris</i> B7		6 to 10
P11S		26/08/2008	791505	7418484	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		6
P11S		26/08/2008	791505	7418484	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
P14-S		24/08/2003	791562	7418497	50 K	Isopoda		Isopoda indet.		11 to 25
P20-D		24/08/2003	791464	7418372	50 K	Amphipoda		Amphipoda indet.		2 to 5
P20-D		24/08/2003	791464	7418372	50 K	Isopoda		Isopoda indet.		11 to 25
P20-D		24/08/2003	791464	7418372	50 K	Ostracoda		Ostracoda indet.		11 to 25
P22D		17/05/2009	792222	7419066	50 K	Copepoda		Copepoda indet.		2 to 5
P22I		17/05/2009	792219	7419067	50 K	Copepoda		Copepoda indet.		26 to 50
P22I		17/05/2009	792219	7419067	50 K	Oligochaeta		Oligochaeta indet.		51 to 100
P22S / HEA0139		17/05/2009	792217	7419069	50 K	Amphipoda		Amphipoda indet.		1
P22S / HEA0139		17/05/2009	792217	7419069	50 K	Copepoda		Copepoda indet.		11 to 25
P22S / HEA0139		17/05/2009	792217	7419069	50 K	Oligochaeta		Oligochaeta indet.		1
P22S / HEA0139		17/05/2009	792217	7419069	50 K	Ostracoda		Ostracoda indet.		2 to 5
PP23		04/04/2009	808790	7410233	51 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		1
PP23		25/11/2008	808788	7410231	51 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		2 to 5
Shovelanna		21/05/2009	809275	7414245	51 K	Oligochaeta		Oligochaeta indet.		2 to 5
Shovelanna		21/05/2009	809276	7414244	51 K	Oligochaeta	Phreodrilidae	<i>Phreodrilus</i> indet.		
Shovelanna		21/05/2009	809275	7414245	51 K	Ostracoda	Cypridopsidae	<i>Sarscypridopsis ochracea</i>		2 to 5
Shovelanna		21/05/2009	809276	7414244	51 K	Ostracoda	Cyprididae	<i>Sarscypridopsis ochracea</i>		
T399		18/03/2020	793447	7422107	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		18
T399		11/04/2012	793447	7422107	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
T399		22/11/2009	793447	7422107	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinials Name	Abundance
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Candonidae	<i>Areacandona</i> indet.		1
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Candonidae	<i>Areacandona</i> sp. OB2		2 to 5
T399		14/03/2014	793447	7422107	50 K	Bathynellacea	Bathynellidae	<i>Bathynellidae</i> indet.		2
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Candonidae	<i>Candonopsis tenuis</i>		1
T399		8/02/2012	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		18
T399		11/04/2012	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		7
T399		14/03/2014	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
T399		15/12/2014	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		8
T399		15/12/2014	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		8
T399		19/04/2017	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		20
T399		18/03/2020	793447	7422107	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
T399		13/05/2021	793447	7422107	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		2
T399		10/11/2020	793447	7422107	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
T399		05/11/2010	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		4
T399		08/02/2011	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		4
T399		09/02/2011	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		2
T399		22/11/2009	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		3
T399		10/12/2013	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet. OB		5
T399		10/11/2020	793447	7422107	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	Chydaekata 'AMP005'	1
T399		10/11/2020	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops cockingi</i>		1
T399		17/03/2015	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		7
T399		21/04/2010	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1000
T399		05/11/2010	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		47
T399		09/02/2011	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		13
T399		11/04/2012	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		14
T399		14/03/2014	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		600
T399		15/12/2014	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
T399		19/04/2017	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		49
T399		11/12/2019	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
T399		10/11/2020	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2
T399		22/11/2009	793447	7422107	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		300
T399		10/12/2013	793447	7422107	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> indet.		4
T399		14/03/2014	793447	7422107	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> indet.		1
T399		17/03/2015	793447	7422107	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> indet.		2
T399		05/11/2010	793447	7422107	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		9
T399		09/02/2011	793447	7422107	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		1
T399		22/11/2009	793447	7422107	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		7
T399		21/04/2010	793447	7422107	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
T399		05/11/2010	793447	7422107	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		16
T399		09/02/2011	793447	7422107	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		4
T399		11/04/2012	793447	7422107	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		4
T399		05/11/2010	793447	7422107	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	Nitocrella 'COP003'	1
T399		15/12/2014	793447	7422107	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)		1
T399		11/04/2012	793447	7422107	50 K	Ostracoda	Candonidae	<i>Origocandona ?inanitas</i>		2
T399		21/04/2010	793447	7422107	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		4
T399		05/11/2010	793447	7422107	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		2
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		1
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Candonidae	<i>Ostracoda</i> indet.		1
T399		05/11/2010	793447	7422107	50 K	Ostracoda	Candonidae	<i>Ostracoda</i> sp. UNK3b		2
T399		21/04/2010	793447	7422107	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		13
T399		05/11/2010	793447	7422107	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		28
T399		08/02/2011	793447	7422107	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		11
T399		09/02/2011	793447	7422107	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		12
T399		22/11/2009	793447	7422107	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		9

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinals Name	Abundance
T399		10/12/2013	793447	7422107	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris indet.		1
T399		05/11/2010	793447	7422107	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		2
T399		11/04/2012	793447	7422107	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		1
T399		5/11/2010	793447	7422107	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB1 (B02)	Parastenocaris 'COP001'	2
T399		22/11/2009	793447	7422107	50 K	Acarina	Pezidae	Peza sp. OB	Peza 'ACA001'	1
T399		21/04/2010	793447	7422107	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		4
T399		05/11/2010	793447	7422107	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		3
T399		08/02/2011	793447	7422107	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		2
T399		10/12/2013	793447	7422107	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
T399		22/11/2009	793447	7422107	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		5
T399		15/12/2014	793447	7422107	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		4
T399		11/04/2012	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona ?temporaria		2
T399		21/04/2010	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		1
T399		09/02/2011	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		1
T399		21/04/2010	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		9
T399		05/11/2010	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		24
T399		09/02/2011	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		2
T399		11/04/2012	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		3
T399		10/12/2013	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		2
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		11
T399		21/04/2010	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		2
T399		05/11/2010	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		3
T399		09/02/2011	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		3
T399		11/04/2012	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		5
T399		10/11/2020	793447	7422107	50K	Ostracoda	Candonidae	Pilbaracandona kosmos		3
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		2
T399		22/11/2009	793447	7422107	50 K	Ostracoda	Candonidae	Pilbaracandona sp. OB1	Pilbaracandona 'OST001'	3
T399		21/04/2010	793447	7422107	50 K	Oligochaeta	Naididae	Pristina sp. OB		10
T399		05/11/2010	793447	7422107	50 K	Oligochaeta	Naididae	Pristina sp. OB		8
T399		11/04/2012	793447	7422107	50 K	Oligochaeta	Naididae	Pristina sp. OB		1
T399		22/11/2009	793447	7422107	50 K	Oligochaeta	Naididae	Pristina sp. OB		4
T399		21/04/2010	793447	7422107	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T399		08/02/2011	793447	7422107	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T399		09/02/2011	793447	7422107	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T399		8/02/2012	793447	7422107	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T399		11/04/2012	793447	7422107	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
T399		14/03/2014	793447	7422107	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T399		15/12/2014	793447	7422107	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T399		15/12/2014	793447	7422107	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T399		18/03/2020	793447	7422107	50K	Isopoda	Tainisopidae	Pygolabis humphreysi		3
T399		13/05/2021	793447	7422107	50K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T399		10/11/2020	793447	7422107	50K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
T401		16/05/2009	792846	7420507	50 K	Amphipoda		Amphipoda indet.		1
T401		16/05/2009	792846	7420507	50 K	Bathynellacea		Bathynellacea indet.		2 to 5
T401		21/04/2010	792845	7420504	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		9
T401		22/11/2009	792845	7420504	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		7
T401		16/05/2009	792846	7420507	50 K	Copepoda		Copepoda indet.		51 to 100
T401		21/04/2010	792845	7420504	50 K	Copepoda: Cyclopoida	Cyclopoidae	Diacyclops cockingi		4
T401		22/11/2009	792845	7420504	50 K	Copepoda: Cyclopoida	Cyclopoidae	Diacyclops cockingi		9
T401		11/04/2012	792845	7420504	50 K	Copepoda: Cyclopoida	Cyclopoidae	Diacyclops humphreysi		7
T401		13/12/2013	792845	7420504	50 K	Copepoda: Cyclopoida	Cyclopoidae	Diacyclops humphreysi		1
T401		15/03/2014	792845	7420504	50 K	Copepoda: Cyclopoida	Cyclopoidae	Diacyclops humphreysi		20
T401		22/11/2009	792845	7420504	50 K	Copepoda: Cyclopoida	Cyclopoidae	Diacyclops humphreysi		17
T401		08/02/2011	792845	7420504	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		1
T401		11/04/2012	792845	7420504	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		10

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinals Name	Abundance
T401		13/12/2013	792845	7420504	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		1
T401		22/11/2009	792845	7420504	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		13
T401		13/12/2013	792845	7420504	50 K	Oligochaeta	Naididae	Naididae indet.		3
T401		15/03/2014	792845	7420504	50 K	Oligochaeta	Naididae	Naididae indet.		7
T401		16/05/2009	792846	7420507	50 K	Oligochaeta		Oligochaeta indet.		51 to 100
T401		16/05/2009	792846	7420507	50 K	Ostracoda		Oligochaeta indet.		101 to 500
T401		22/11/2009	792845	7420504	50 K	Ostracoda	Candonidae	Oligochaeta indet.		1
T401		15/03/2014	792845	7420504	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		4
T401		22/11/2009	792845	7420504	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		8
T401		15/03/2014	792845	7420504	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1-OB2		1
T401		15/03/2014	792845	7420504	50 K	Copepoda: Cyclopoida	Cyclopoidae	Pescecylops pilbaricus		1
T401		22/11/2009	792845	7420504	50 K	Acarina	Pezidae	Peza sp. OB	Peza 'ACA001'	1
T401		5/11/2010	792845	7420504	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		2
T401		05/11/2010	792845	7420504	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		2
T401		08/02/2011	792845	7420504	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
T401		22/11/2009	792845	7420504	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
T401		22/11/2009	792845	7420504	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		1
T401		5/11/2010	792845	7420504	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		1
T401		05/11/2010	792845	7420504	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		1
T401		13/12/2013	792845	7420504	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		1
T401		15/03/2014	792845	7420504	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		2
T401		15/03/2014	792845	7420504	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		2
T401		21/04/2010	792845	7420504	50 K	Oligochaeta	Naididae	Pristina sp. OB		14
T401		05/11/2010	792845	7420504	50 K	Oligochaeta	Naididae	Pristina sp. OB		1
T401		5/11/2010	792845	7420504	50 K	Oligochaeta	Naididae	Pristina sp. OB		1
T401		08/02/2011	792845	7420504	50 K	Oligochaeta	Naididae	Pristina sp. OB		2
T401		8/02/2012	792845	7420504	50 K	Oligochaeta	Naididae	Pristina sp. OB		12
T401		11/04/2012	792845	7420504	50 K	Oligochaeta	Naididae	Pristina sp. OB		5
T401		22/11/2009	792845	7420504	50 K	Oligochaeta	Naididae	Pristina sp. OB		28
T401		21/04/2010	792845	7420504	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T401		15/03/2014	792845	7420504	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T401		22/11/2009	792845	7420504	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
T411A		13/04/2012	785047	7415790	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
T411A		12/12/2013	785047	7415790	50 K	Bathynellacea	Parabathynellidae	Billibathynella cassidis		2
T411A		18/03/2015	785047	7415790	50 K	Bathynellacea	Parabathynellidae	Billibathynella cassidis		1
T411A		12/05/2009	785047	7415790	50 K	Ostracoda		Ostracoda indet.		2 to 5
T411A		04/11/2010	785047	7415790	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	3
T411A		9/02/2012	785047	7415790	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	5
T411A		13/04/2012	785047	7415790	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001	Paramelitidae n. Gen. 1 'AMP001'	6
T411A		20/04/2017	785047	7415790	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1 AMP001		3
T411A		13/04/2012	785047	7415790	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. ?OP1		2
T411A		9/02/2012	785047	7415790	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OP1		3
UNK02		08/02/2011	796202	7425820	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		3
UNK02		09/02/2011	796202	7425820	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
UNK02		09/02/2011	796202	7425820	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cf. sobeprolatus		6
UNK02		05/11/2010	796202	7425820	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		6
UNK02		08/02/2011	796202	7425820	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		64
UNK02		09/02/2011	796202	7425820	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		32
UNK02		05/11/2010	796202	7425820	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		4
UNK02		05/11/2010	796202	7425820	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		7
UNK02		08/02/2011	796202	7425820	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		2
UNK02		05/11/2010	796202	7425820	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	2
UNK02		08/02/2011	796202	7425820	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	165
UNK02		09/02/2011	796202	7425820	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	25
UNK02		08/02/2011	796202	7425820	50 K	Ostracoda	Candonidae	Origocandona inanitas		6

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinials Name	Abundance
UNK02		09/02/2011	796202	7425820	50 K	Ostracoda	Candonidae	<i>Origocandona inanitas</i>		3
UNK02		05/11/2010	796202	7425820	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
UNK02		08/02/2011	796202	7425820	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
UNK02		09/02/2011	796202	7425820	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		5
UNK02		05/11/2010	796202	7425820	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
UNK02		05/11/2010	796202	7425820	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		15
UNK02		08/02/2011	796202	7425820	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		10
UNK02		09/02/2011	796202	7425820	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		10
UNK02		09/02/2011	796202	7425820	50 K	Oligochaeta	Naididae	<i>Pristina</i> sp. OB		1
UNKNOWN2		12/04/2012	783760	7406443	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		1
UNKNOWN2		15/05/2009	783760	7406443	50 K	Oligochaeta		Oligochaeta indet.		51 to 100
UNKNOWN2		12/04/2012	783760	7406443	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris</i> 'COP001'	20
UNKNOWN2		31/08/2008	783760	7406443	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		11 to 25
UNKNOWN2		9/02/2012	783760	7406443	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OB3		4
UNKNOWN2		12/04/2012	783760	7406443	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OB3		55
VT-C / HMG0064		19/03/2008	811625	7415471	51 K	Copepoda		Copepoda indet.		2 to 5
VT-C / HMG0064		19/03/2008	811622	7415476	51 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
VT-C / HMG0064		17/12/2007	811623	7415477	51 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
VT-C / HMG0064		19/03/2008	811625	7415471	51 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
VT-C / HMG0064		17/12/2007	811622	7415476	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> indet.		1
VT-C / HMG0064		19/03/2008	811622	7415476	51 K	Oligochaeta	Enchytraeidae	<i>Enchytraeus</i> indet.		1
VT-C / HMG0064		17/12/2007	811623	7415477	51 K	Oligochaeta		Oligochaeta indet.		2 to 5
W010 / HEOP0314		01/04/2009	788832	7414669	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
W028		15/05/2009	785756	7409060	50 K	Amphipoda		Amphipoda indet.		2 to 5
W028		12/11/2020	785756	7409060	50K	Amphipoda		Amphipoda indet.		2
W028		01/04/2009	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		11 to 25
W028		30/08/2008	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
W028		20/04/2010	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		501 to 1000
W028		20/04/2010	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		640
W028		8/02/2012	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		17
W028		8/02/2012	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
W028		12/04/2012	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		8
W028		14/12/2013	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
W028		15/03/2014	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		50
W028		14/12/2014	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		2
W028		20/04/2017	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		11
W028		11/12/2019	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		2
W028		11/05/2021	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		2
W028		12/11/2020	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
W028		20/11/2009	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		51 to 100
W028		20/11/2009	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		60
W028		19/03/2015	785756	7409060	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		30
W028		11/05/2021	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
W028		12/11/2020	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
W028		01/04/2009	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		1
W028		30/08/2008	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		1
W028		14/12/2013	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet. OB		1
W028		15/03/2014	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet. OB		4
W028		19/03/2015	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. ?OB1		5
W028		20/04/2010	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	<i>Chydaekata</i> 'AMP005'	1
W028		20/04/2010	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	<i>Chydaekata</i> 'AMP005'	1
W028		03/11/2010	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	<i>Chydaekata</i> 'AMP005'	6 to 10
W028		3/11/2010	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	<i>Chydaekata</i> 'AMP005'	6
W028		8/02/2012	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	<i>Chydaekata</i> 'AMP005'	3
W028		12/04/2012	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	<i>Chydaekata</i> 'AMP005'	10

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	Taxon	WAMinals Name	Abundance
W028		14/12/2014	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	Chydaekata 'AMP005'	1
W028		20/04/2017	785756	7409060	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> sp. OB1_AMP005	Chydaekata 'AMP005'	1
W028		15/05/2009	785756	7409060	50 K	Copepoda		<i>Copepoda</i> indet.		101 to 500
W028		01/04/2009	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11 to 25
W028		30/08/2008	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		26 to 50
W028		20/04/2010	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		501 to 1000
W028		20/04/2010	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1000
W028		09/02/2011	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11 to 25
W028		9/02/2011	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		25
W028		8/02/2012	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
W028		8/02/2012	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2
W028		8/02/2012	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		67
W028		12/04/2012	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		200
W028		14/12/2013	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		50
W028		15/03/2014	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		150
W028		14/12/2014	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11
W028		20/04/2017	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		8
W028		11/05/2021	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		85
W028		12/11/2020	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		20
W028		20/11/2009	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		26 to 50
W028		20/11/2009	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		47
W028		19/03/2015	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		150
W028		11/05/2021	785756	7409060	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sp.</i>		2
W028		14/12/2013	785756	7409060	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		2
W028		11/05/2021	785756	7409060	50 K	Ostracoda	Candonidae	<i>Origocandona</i> 'BOS099'		2
W028		12/11/2020	785756	7409060	50 K	Ostracoda	Candonidae	<i>Origocandona</i> 'BOS099'		2
W028		9/02/2011	785756	7409060	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
W028		09/02/2011	785756	7409060	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
W028		19/03/2015	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocarididae	<i>Parastenocaris cf._jane</i>		3
W028		01/04/2009	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocarididae	<i>Parastenocaris jane</i>		2 to 5
W028		20/04/2010	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		101 to 500
W028		20/04/2010	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		160
W028		03/11/2010	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
W028		3/11/2010	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
W028		12/04/2012	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
W028		15/03/2014	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
W028		20/11/2009	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		11 to 25
W028		20/11/2009	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
W028		20/11/2009	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
W028		20/11/2009	785756	7409060	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		20
W028		03/11/2010	785756	7409060	50 K	Acarina	Pezidae	<i>Peza</i> sp. OB	<i>Peza</i> 'ACA001'	2 to 5
W028		3/11/2010	785756	7409060	50 K	Acarina	Pezidae	<i>Peza</i> sp. OB	<i>Peza</i> 'ACA001'	2
W028		12/11/2020	785756	7409060	50 K	Ostracoda	Candonidae	<i>Pilbaracandona</i> <i>colonia</i>		4
W028		19/03/2015	785756	7409060	50 K	Ostracoda: Podocopida	Candonidae	<i>Pilbaracandona</i> sp. OB1	<i>Pilbaracandona</i> 'OST001'	1
W028		20/04/2010	785756	7409060	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W028		8/02/2012	785756	7409060	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W028		12/04/2012	785756	7409060	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W028		15/03/2014	785756	7409060	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W028		19/03/2015	785756	7409060	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
W028		20/11/2009	785756	7409060	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W028		20/11/2009	785756	7409060	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W028		20/11/2009	785756	7409060	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W029		17/03/2020	785784	7409064	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		5
W029		30/08/2008	785784	7409064	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
W029		11/05/2021	785784	7409064	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		6
W029		12/11/2020	785784	7409064	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	Taxon	WAMinals Name	Abundance
W029		30/08/2008	785784	7409064	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
W029		11/05/2021	785784	7409064	50K	Amphipoda	Paramelitidae	Chydaekata sp. OB1_AMP005	Chydaekata 'AMP005'	1
W029		30/08/2008	785784	7409064	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		26 to 50
W029		11/05/2021	785784	7409064	50K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		115
W029		12/11/2020	785784	7409064	50K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		40
W029		30/08/2008	785784	7409064	50 K	Oligochaeta	Enchytraeidae	Enchytraeus PST1/PST2		2 to 5
W029		11/05/2021	785784	7409064	50K	Ostracoda	Candonidae	Origocandona 'BOS099'		3
W029		17/03/2020	785784	7409064	50K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
W029i		15/05/2009	785784	7409064	50 K	Amphipoda		Amphipoda indet.		2 to 5
W029i		15/05/2009	785784	7409064	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		101 to 500
W029i		15/05/2009	785784	7409064	50 K	Copepoda: Harpacticoida		Harpacticoida indet.		6 to 10
W029i		15/05/2009	785784	7409064	50 K	Ostracoda		Ostracoda indet.		6 to 10
W029i		15/05/2009	785784	7409064	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
W029ii		01/04/2009	785766	7409023	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		1
W056		14/05/2021	792588	7419470	50 K	Copepoda: Harpacticoida	Ameiridae	Ameiridae sp.		1
W056		14/05/2021	792588	7419470	50 K	Amphipoda		Amphipoda indet.		1
W056		08/02/2011	792588	7419470	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		14
W056		13/12/2013	792588	7419470	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		30
W056		12/04/2012	792588	7419470	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		3
W056		15/03/2014	792588	7419470	50 K	Ostracoda	Candonidae	Candoninae indet.		1
W056		14/05/2021	792588	7419470	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		7
W056		10/11/2020	792588	7419470	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		1
W056		08/02/2011	792588	7419470	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		5
W056		17/03/2015	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		3
W056		13/12/2013	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		2
W056		08/02/2011	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cf. sobeprolatus		3
W056		21/11/2009	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		25
W056		21/04/2010	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		1
W056		04/11/2010	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		4
W056		08/02/2011	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		11
W056		12/04/2012	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		60
W056		13/12/2013	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		4
W056		15/03/2014	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		3
W056		21/11/2009	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops sobeprolatus		13
W056		13/12/2013	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops sobeprolatus		1
W056		15/03/2014	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops sobeprolatus		1
W056		21/11/2009	792588	7419470	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		1
W056		12/04/2012	792588	7419470	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		1
W056	WP56	15/03/2014	792588	7419470	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		1
W056		17/03/2015	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Pescecylops pilbaricus		1
W056		21/11/2009	792588	7419470	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	1
W056		08/02/2011	792588	7419470	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	6
W056		13/12/2013	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	nr. Pilbaracylops sp. OB		1
W056		12/04/2012	792588	7419470	50 K	Ostracoda	Candonidae	Origocandona ?inanitas		2
W056		21/11/2009	792588	7419470	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		9
W056		08/02/2011	792588	7419470	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
W056		13/12/2013	792588	7419470	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB1-OB2		1
W056		12/04/2012	792588	7419470	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3	Paramelitidae n. Gen. 2 'AMP003'	1
W056		12/04/2012	792588	7419470	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3	Paramelitidae n. Gen. 2 'AMP003'	5
W056		13/12/2013	792588	7419470	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3	Paramelitidae n. Gen. 2 'AMP003'	1
W056		15/03/2014	792588	7419470	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3	Paramelitidae n. Gen. 2 'AMP003'	1
W056		21/11/2009	792588	7419470	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		2 to 5
W056		08/02/2012	792588	7419470	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		1
W056		21/11/2009	792588	7419470	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB1 (B02)	Parastenocaris 'COP001'	1
W056		12/04/2012	792588	7419470	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB1 (B02)	Parastenocaris 'COP001'	2

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W056		21/11/2009	792588	7419470	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB2	Parastenocaris 'COP002'	1
W056		12/04/2012	792588	7419470	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB2	Parastenocaris 'COP002'	2
W056		14/05/2021	792588	7419470	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		2
W056		13/12/2013	792588	7419470	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		5
W056		21/11/2009	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		1
W056		21/11/2009	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		1
W056		08/02/2011	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		3
W056		17/03/2015	792588	7419470	50 K	Copepoda: Cyclopoida	Cyclopidae	Pilbaracyclops supersensus		2
W056		21/11/2009	792588	7419470	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
W056		21/04/2010	792588	7419470	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		4
W056		15/03/2014	792588	7419470	50 K	Platyhelminthes		Turbellaria indet.		1
W057		01/09/2008	785411	7416042	50 K	Oligochaeta	Phreodrilidae	Phreodrilus indet.		1
W059		12/05/2009	785448	7416020	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
W059		12/05/2009	785448	7416020	50 K	Ostracoda		Ostracoda indet.		2 to 5
W059		12/05/2009	785448	7416020	50 K	Oligochaeta	Phreodrilidae	Phreodrilus indet.		1
W065 / HEOP0374		12/05/2009	788100	7416344	50 K	Copepoda		Copepoda indet.		51 to 100
W065 / HEOP0374		12/05/2009	788100	7416344	50 K	Oligochaeta		Oligochaeta indet.		11 to 25
W065 / HEOP0374		12/05/2009	788100	7416344	50 K	Ostracoda		Ostracoda indet.		6 to 10
W077		14/05/2009	791498	7417287	50 K	Bathynellacea		Bathynellacea indet.		1
W077		14/05/2009	791498	7417287	50 K	Copepoda		Copepoda indet.		26 to 50
W077		14/05/2009	791498	7417287	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
W077		14/05/2009	791498	7417287	50 K	Ostracoda		Ostracoda indet.		1
W077		14/05/2009	791498	7417287	50 K	Isopoda	Tainisopidae	Pygolabis weeliwolli		1
W078 / HEOP0387		18/03/2015	791748	7417311	50 K	Oligochaeta	Phreodrilidae	?Insulodrilus-indet.		2
W078 / HEOP0387		02/09/2008	791947	7417303	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		2 to 5
W078 / HEOP0387		5/11/2010	791748	7417311	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		9
W078 / HEOP0387		5/11/2010	791748	7417311	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		37
W078 / HEOP0387		05/11/2010	791947	7417303	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		46
W078 / HEOP0387		9/02/2011	791748	7417311	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		12
W078 / HEOP0387		09/02/2011	791947	7417303	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		11 to 25
W078 / HEOP0387		13/12/2013	791748	7417311	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		9
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		50
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Ostracoda	Candonidae	Candoninae indet.		1
W078 / HEOP0387		5/11/2010	791748	7417311	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		5
W078 / HEOP0387		13/12/2013	791748	7417311	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		3
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		2
W078 / HEOP0387		15/12/2014	791748	7417311	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		2
W078 / HEOP0387		18/03/2015	791748	7417311	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		10
W078 / HEOP0387		31/08/2008	791748	7417311	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
W078 / HEOP0387		02/09/2008	791947	7417303	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		2
W078 / HEOP0387		05/11/2010	791947	7417303	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		2
W078 / HEOP0387		9/02/2011	791748	7417311	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
W078 / HEOP0387		09/02/2011	791947	7417303	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
W078 / HEOP0387		02/09/2008	791947	7417303	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		6 to 10
W078 / HEOP0387		5/11/2010	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		2
W078 / HEOP0387		05/11/2010	791947	7417303	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		2 to 5
W078 / HEOP0387		9/02/2011	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		11
W078 / HEOP0387		09/02/2011	791947	7417303	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		11 to 25
W078 / HEOP0387		13/04/2012	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		22
W078 / HEOP0387		13/12/2013	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		7
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		16
W078 / HEOP0387		18/03/2015	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		6
W078 / HEOP0387		13/04/2012	791748	7417311	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		20
W078 / HEOP0387		13/12/2013	791748	7417311	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		1
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Ostracoda	Limnocytheridae	Gomphodella hirsuta		5

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinals Name	Abundance
W078 / HEOP0387		18/03/2015	791748	7417311	50 K	Ostracoda: Podocopida	Limnocytheridae	<i>Gomphodella hirsuta</i>		35
W078 / HEOP0387		13/04/2012	791748	7417311	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		1
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Amphipoda	Paramelitidae	<i>Maarrka etheli</i>		2
W078 / HEOP0387		5/11/2010	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcycllops varicans</i>		1
W078 / HEOP0387		05/11/2010	791947	7417303	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcycllops varicans</i>		1
W078 / HEOP0387		9/02/2011	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcycllops varicans</i>		4
W078 / HEOP0387		09/02/2011	791947	7417303	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Microcycllops varicans</i>		2 to 5
W078 / HEOP0387		02/09/2008	791947	7417303	50 K	Oligochaeta	Naididae	<i>Naididae indet.</i>		2 to 5
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Oligochaeta	Naididae	<i>Naididae indet.</i>		1
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>nr. Pilbaracyclops sp. OB</i>		1
W078 / HEOP0387		05/11/2010	791947	7417303	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae indet.</i>		2 to 5
W078 / HEOP0387		9/02/2011	791748	7417311	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae indet.</i>		1
W078 / HEOP0387		09/02/2011	791947	7417303	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae indet.</i>		1
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae sp. OB3</i>	<i>Paramelitidae n. Gen. 2 'AMP003'</i>	5
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris indet.</i>		1
W078 / HEOP0387		10/02/2012	791748	7417311	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Pilbaracyclops supersensus</i>		1
W078 / HEOP0387		05/11/2010	791947	7417303	50 K	Oligochaeta	Naididae	<i>Pristina sp. OB</i>		14
W078 / HEOP0387		5/11/2010	791748	7417311	50 K	Oligochaeta	Naididae	<i>Pristina sp. OB</i>		14
W078 / HEOP0387		13/04/2012	791748	7417311	50 K	Oligochaeta	Naididae	<i>Pristina sp. OB</i>		4
W078 / HEOP0387		31/08/2008	791748	7417311	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		6
W078 / HEOP0387		5/11/2010	791748	7417311	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		12
W078 / HEOP0387		05/11/2010	791947	7417303	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		12
W078 / HEOP0387		9/02/2011	791748	7417311	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
W078 / HEOP0387		09/02/2011	791947	7417303	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
W078 / HEOP0387		13/12/2013	791748	7417311	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		19
W078 / HEOP0387		15/03/2014	791748	7417311	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		30
W078 / HEOP0387		15/12/2014	791748	7417311	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		7
W078 / HEOP0387		15/12/2014	791748	7417311	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		7
W078 / HEOP0387		18/03/2015	791748	7417311	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		17
W078i / HEOP0387i		13/05/2009	791975	7417317	50 K	Bathynellacea		<i>Bathynellacea indet.</i>		1
W078i / HEOP0387i		13/05/2009	791975	7417317	50 K	Copepoda		<i>Copepoda indet.</i>		2 to 5
W078i / HEOP0387i		13/05/2009	791975	7417317	50 K	Ostracoda		<i>Ostracoda indet.</i>		2 to 5
W078i / HEOP0387i		13/05/2009	791975	7417317	50 K	Isopoda	Tainisopidae	<i>Pygolabis weeliwolli</i>		1
W079D		14/05/2009	790935	7417331	50 K	Amphipoda		<i>Amphipoda indet.</i>		2 to 5
W079D		14/05/2009	790935	7417331	50 K	Copepoda		<i>Copepoda indet.</i>		51 to 100
W079D		14/05/2009	790935	7417331	50 K	Ostracoda		<i>Ostracoda indet.</i>		11 to 25
W079D		14/05/2009	790935	7417331	50 K	Isopoda	Tainisopidae	<i>Pygolabis weeliwolli</i>		1
W079S		14/05/2009	790901	7417461	50 K	Amphipoda		<i>Amphipoda indet.</i>		6 to 10
W079S		14/05/2009	790901	7417461	50 K	Copepoda		<i>Copepoda indet.</i>		26 to 50
W079S		14/05/2009	790901	7417461	50 K	Ostracoda		<i>Ostracoda indet.</i>		101 to 500
W081		13/04/2012	774588	7420829	50 K	Ostracoda	Candonidae	<i>Candonopsis tenuis</i>		1
W081		12/05/2009	774588	7420829	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		1
W081		04/09/2008	774588	7420829	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		2 to 5
W081		04/09/2008	774588	7420829	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		1
W081		11/12/2013	774588	7420829	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		19
W081		19/03/2015	774588	7420829	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae indet.</i>		75
W081		04/09/2008	774588	7420829	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae PST1</i>		2 to 5
W081		04/09/2008	774588	7420829	50 K	Oligochaeta	Phreodrilidae	<i>Insulodrilus indet.</i>		1
W081		04/09/2008	774588	7420829	50 K	Oligochaeta	Phreodrilidae	<i>Insulodrilus WA31</i>		1
W081		04/09/2008	774588	7420829	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilidae indet.</i>		6 to 10
W086		9/02/2012	790448	7413044	50 K	Acarina	Pezidae	<i>Penza sp. OB</i>	<i>Penza 'ACA001'</i>	1
W086		30/08/2008	790448	7413044	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilidae indet.</i>		2 to 5
W086		15/12/2013	790448	7413044	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilidae indet.</i>		2
W086		18/03/2014	790448	7413044	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilidae indet.</i>		3
W086		13/04/2012	790448	7413044	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilidae sp. ?OP1</i>		11

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W086		9/02/2012	790448	7413044	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae sp. OP1		4
W099		15/05/2009	789791	7411751	50 K	Amphipoda		Amphipoda indet.		2 to 5
W099		9/02/2012	789791	7411751	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		1
W099		12/04/2012	789791	7411751	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		2
W099		30/08/2008	789784	7411758	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae PST1		101 to 500
W099		15/05/2009	789791	7411751	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
W105		13/04/2012	792911	7417363	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		13
W105		09/02/2011	792885	7417378	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		8
W105		10/02/2012	792911	7417363	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		200
W105		13/04/2012	792911	7417363	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		70
W105		09/02/2011	792885	7417378	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops cf. sobeprolatus		2
W105		10/02/2012	792911	7417363	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		990
W105		13/04/2012	792911	7417363	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		1000
W105		09/02/2011	792885	7417378	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		4
W105		09/02/2011	792885	7417378	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		2
W105		13/04/2012	792911	7417363	50 K	Amphipoda	Paramelitidae	Maarrka etheli		5
W105		10/02/2012	792911	7417363	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	8
W105		13/04/2012	792911	7417363	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	17
W105		09/02/2011	792885	7417378	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)	Nitocrella 'COP003'	3
W105		10/02/2012	792911	7417363	50 K	Copepoda: Cyclopoida	Cyclopidae	Orbuscyclops westaustraliensis		10
W105		10/02/2012	792911	7417363	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		1
W105		13/04/2012	792911	7417363	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		2
W105		10/02/2012	792911	7417363	50 K	Oligochaeta	Naididae	Pristina sp. OB		3
W105		10/02/2012	792911	7417363	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		88
W105		13/04/2012	792911	7417363	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		100
W105		09/02/2011	792885	7417378	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		20
W105		18/03/2015	792885	7417378	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		10
W105		13/05/2009	792885	7417378	50 K	Amphipoda		Amphipoda indet.		2 to 5
W105		01/04/2009	792885	7417378	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		6 to 10
W105		02/09/2008	792885	7417378	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		1
W105		05/11/2010	792885	7417378	50 K	Copepoda: Harpacticoida	Ameiridae	Archinitocrella newmanensis		6
W105		05/11/2010	792885	7417378	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		2
W105		13/05/2009	792885	7417378	50 K	Copepoda		Copepoda indet.		101 to 500
W105		01/04/2009	792885	7417378	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		6 to 10
W105		02/09/2008	792885	7417378	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		2 to 5
W105		05/11/2010	792885	7417378	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		2
W105		05/11/2010	792885	7417378	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops sobeprolatus		1
W105		05/11/2010	792885	7417378	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		1
W105		13/05/2009	792885	7417378	50 K	Isopoda		Isopoda indet.		1
W105		18/03/2015	792885	7417378	50 K	Amphipoda	Paramelitidae	Maarrka etheli		1
W105		05/11/2010	792885	7417378	50 K	Amphipoda	Paramelitidae	Maarrka etheli		1
W105		01/04/2009	792885	7417378	50 K	Amphipoda	Paramelitidae	Maarrka indet.		1
W105		01/04/2009	792885	7417378	50 K	Copepoda: Cyclopoida	Cyclopidae	Mesocyclops notius		11 to 25
W105		02/09/2008	792885	7417378	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella indet.		1
W105		13/05/2009	792885	7417378	50 K	Oligochaeta		Oligochaeta indet.		1
W105		01/04/2009	792885	7417378	50 K	Ostracoda		Ostracoda indet.		1
W105		13/05/2009	792885	7417378	50 K	Ostracoda		Ostracoda indet.		1
W105		05/11/2010	792885	7417378	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
W105		18/03/2015	792885	7417378	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB3 (gen 2 B13)	Paramelitidae n. Gen. 2 'AMP003'	1
W105		05/11/2010	792885	7417378	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		3
W105		05/11/2010	792911	7417363	50 K	Ostracoda	Candonidae	Pilbaracandona sp. OB1	Pilbaracandona 'OST001'	1
W105		05/11/2010	792911	7417363	50 K	Ostracoda	Candonidae	Pilbaracandona sp. OB2	Pilbaracandona 'OST002'	8
W105		9/02/2011	792911	7417363	50 K	Ostracoda	Candonidae	Pilbaracandona sp. OB2	Pilbaracandona 'OST002'	1
W105		18/03/2015	792885	7417378	50 K	Ostracoda: Podocopida	Candonidae	Pilbaracandona sp. OB2	Pilbaracandona 'OST002'	1
W105		01/04/2009	792885	7417378	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinals Name	Abundance
W105		13/12/2014	792885	7417378	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		5
W105		13/12/2014	792885	7417378	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		5
W105		18/03/2015	792885	7417378	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		7
W105		05/11/2010	792885	7417378	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		2
W116		11/12/2019	797472	7426205	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2
W116		18/03/2020	797472	7426205	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		150
W116		18/03/2020	797472	7426205	50K	Amphipoda	Paramelitidae	Paramelitidae sp. OB2 AMP002		1
W116		11/04/2012	797472	7426205	50 K	Aphanoneura	Aeolosomatidae	<i>Aeolosoma</i> indet.		1
W116		14/03/2014	797472	7426205	50 K	Aphanoneura	Aeolosomatidae	<i>Aeolosoma</i> sp. OB		1
W116		21/04/2010	797472	7426205	50 K	Bathynellacea	Parabathynellidae	<i>Brevisomabathynella</i> cf. <i>pilbaraensis</i>		1
W116		21/04/2010	797472	7426205	50 K	Bathynellacea	Parabathynellidae	<i>Brevisomabathynella</i> <i>pilbaraensis</i>		1
W116		17/03/2015	797472	7426205	50 K	Bathynellacea	Parabathynellidae	<i>Brevisomabathynella</i> <i>pilbaraensis</i>		1
W116		18/03/2020	797472	7426205	50K	Bathynellacea	Parabathynellidae	<i>Brevisomabathynella</i> <i>pilbaraensis</i>		1
W116		13/12/2013	797472	7426205	50 K	Ostracoda	Candonidae	<i>Candonidae</i> indet.		12
W116		11/04/2012	797472	7426205	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		3
W116		13/12/2014	797472	7426205	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		3
W116		13/12/2014	797472	7426205	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		3
W116		17/03/2015	797472	7426205	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		7
W116		18/04/2017	797472	7426205	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		2
W116		11/12/2019	797472	7426205	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
W116		18/03/2020	797472	7426205	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
W116		10/05/2021	797472	7426205	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		2
W116		10/11/2020	797472	7426205	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		6
W116		22/11/2009	797472	7426205	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		1
W116		17/03/2015	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		800
W116		21/04/2010	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		110
W116		05/11/2010	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		6
W116		08/02/2011	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		45
W116		8/02/2012	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		109
W116		8/02/2012	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
W116		11/04/2012	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		200
W116		13/12/2013	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		200
W116		14/03/2014	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		35
W116		18/04/2017	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
W116		10/05/2021	797472	7426205	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		80
W116		22/11/2009	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		156
W116		13/12/2013	797472	7426205	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> indet.		1
W116		14/03/2014	797472	7426205	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> indet.		1
W116		21/04/2010	797472	7426205	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		10
W116		08/02/2011	797472	7426205	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		6
W116		22/11/2009	797472	7426205	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		1
W116		8/02/2012	797472	7426205	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB2		1
W116		22/11/2009	797472	7426205	50 K	Isopoda		Isopoda indet.		1
W116		8/02/2011	797472	7426205	50 K	Nematoda		Nematoda indet.		5
W116		21/04/2010	797472	7426205	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	6
W116		08/02/2011	797472	7426205	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	2
W116		8/02/2012	797472	7426205	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	10
W116		11/04/2012	797472	7426205	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	22
W116		13/12/2013	797472	7426205	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	1
W116		22/11/2009	797472	7426205	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella</i> 'COP003'	3
W116		21/04/2010	797472	7426205	50 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		3
W116		22/11/2009	797472	7426205	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Orbuscyclops westaustraliensis</i>		18
W116		08/02/2011	797472	7426205	50 K	Ostracoda	Candonidae	<i>Ostracoda</i> sp. UNK3b		1
W116		21/04/2010	797472	7426205	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		4
W116		05/11/2010	797472	7426205	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		4

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinals Name	Abundance
W116		08/02/2011	797472	7426205	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
W116		14/03/2014	797472	7426205	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		4
W116		10/05/2021	797472	7426205	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		2
W116		22/11/2009	797472	7426205	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		17
W116		14/03/2014	797472	7426205	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris indet.		5
W116		11/04/2012	797472	7426205	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		2
W116		13/12/2013	797472	7426205	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		2
W116		14/03/2014	797472	7426205	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		3
W116		22/11/2009	797472	7426205	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		7
W116		11/04/2012	797472	7426205	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB1 (B02)	Parastenocaris 'COP001'	1
W116		8/02/2011	797472	7426205	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
W116		11/04/2012	797472	7426205	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		7
W116		17/03/2015	797472	7426205	50 K	Ostracoda: Podocopida	Candonidae	Pilbaracandona eberhardi		5
W116		11/04/2012	797472	7426205	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		6
W116		13/12/2013	797472	7426205	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		8
W116		14/03/2014	797472	7426205	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		10
W116		18/04/2017	797472	7426205	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		4
W116		10/05/2021	797472	7426205	50K	Ostracoda	Candonidae	Pilbaracandona eberhardi		14
W116		14/03/2014	797472	7426205	50 K	Ostracoda	Candonidae	Pilbaracandona indet.		8
W116		8/02/2011	797472	7426205	50 K	Ostracoda	Candonidae	Pilbaracandona sp. OB1	Pilbaracandona 'OST001'	1
W116		11/04/2012	797472	7426205	50 K	Platyhelminthes		Platyhelminthes indet.		20
W116	WP116	16/05/2009	797480	7426205	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
W116		14/03/2014	797472	7426205	50 K	Platyhelminthes		Turbellaria indet.		1
W117		11/12/2019	797090	7426353	50K	Haplotaxida	Enchytraeidae	Enchytraeidae indet.		46
W117		17/03/2015	797090	7426353	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
W117		13/12/2014	797090	7426353	50 K	Bathynellacea	Parabathynellidae	Brevisomabathynella pilbaraensis		1
W117		13/12/2014	797090	7426353	50 K	Bathynellacea	Parabathynellidae	Brevisomabathynella pilbaraensis		1
W117		17/03/2015	797090	7426353	50 K	Bathynellacea	Parabathynellidae	Brevisomabathynella pilbaraensis		1
W117		13/12/2014	797090	7426353	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		2
W117		13/12/2014	797090	7426353	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		3
W117		17/03/2015	797090	7426353	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		2
W117		18/04/2017	797090	7426353	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		6
W117		11/12/2019	797090	7426353	50K	Amphipoda	Paramelitidae	Chydaekata acuminata		6
W117		18/03/2020	797090	7426353	50K	Amphipoda	Paramelitidae	Chydaekata acuminata		5
W117		10/05/2021	797090	7426353	50K	Amphipoda	Paramelitidae	Chydaekata acuminata		26
W117		10/11/2020	797090	7426353	50K	Amphipoda	Paramelitidae	Chydaekata acuminata		1
W117		17/03/2015	797090	7426353	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		196
W117		18/04/2017	797090	7426353	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		6
W117		11/12/2019	797090	7426353	50K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		10
W117		10/05/2021	797090	7426353	50K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		1
W117		17/03/2015	797090	7426353	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)		100
W117		02/03/2016	797090	7426353	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)		22
W117		17/03/2015	797090	7426353	50 K	Copepoda: Harpacticoida	Ameiridae	Nitocrella karanovici (B08)		102
W117		17/03/2015	797090	7426353	50 K	Ostracoda: Podocopida	Candonidae	Notacandona gratia		10
W117		17/03/2015	797090	7426353	50 K	Copepoda: Cyclopoida	Cyclopidae	Orbuscyclops westaustraliensis		1
W117		10/11/2020	797090	7426353	50K	Amphipoda	Paramelitidae	Paramelitidae indet.		11
W117		17/03/2015	797090	7426353	50 K	Copepoda: Harpacticoida	Parastenocarididae	Parastenocaris cf. jane		38
W117		10/11/2020	797090	7426353	50K	Oligochaeta	Phreodrilidae	Phreodrilidae sp.		1
W120 / HEOP0430		14/05/2009	792121	7418670	50 K	Amphipoda		Amphipoda indet.		1
W120 / HEOP0430		14/05/2009	792121	7418670	50 K	Bathynellacea		Bathynellacea indet.		11 to 25
W120 / HEOP0430		14/05/2009	792121	7418670	50 K	Copepoda		Copepoda indet.		6 to 10
W120 / HEOP0430		14/05/2009	792121	7418670	50 K	Ostracoda		Ostracoda indet.		2 to 5
W135		15/05/2009	788769	7402683	50 K	Ostracoda		Ostracoda indet.		1
W152		11/12/2019	795332	7424204	50K	Amphipoda	Paramelitidae	Paramelitidae sp. OB2 AMP002		1
W152		13/05/2009	795335	7424204	50 K	Amphipoda		Amphipoda indet.		2 to 5

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W152		22/11/2009	795335	7424204	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
W152		11/04/2012	795335	7424204	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
W152		13/12/2013	795335	7424204	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		4
W152		14/03/2014	795335	7424204	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		1
W152		8/02/2012	795335	7424204	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		2
W152		08/02/2011	795335	7424204	50 K	Ostracoda	Candonidae	<i>Areacandona sp. OB3</i>		1
W152		13/12/2013	795335	7424204	50 K	Ostracoda	Candonidae	Candoninae indet.		3
W152		8/02/2012	795335	7424204	50 K	Ostracoda	Candonidae	Candoninae indet.		1
W152		11/12/2019	795332	7424204	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
W152		18/03/2020	795332	7424204	50K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
W152		11/04/2012	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		100
W152		13/12/2013	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		12
W152		13/12/2014	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		3
W152		13/12/2014	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		4
W152		14/03/2014	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		42
W152		17/03/2015	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		17
W152		18/04/2017	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		37
W152		8/02/2012	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
W152		22/11/2009	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		4
W152		21/04/2010	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		10
W152		08/02/2011	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		6
W152		22/11/2009	795335	7424204	50 K	Amphipoda	Paramelitidae	<i>Chydaekata indet.</i>		4
W152		13/05/2009	795335	7424204	50 K	Copepoda		Copepoda indet.		101 to 500
W152		04/09/2008	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		26 to 50
W152		22/11/2009	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		178
W152		21/04/2010	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		300
W152		05/11/2010	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2
W152		08/02/2011	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		69
W152		11/12/2019	795332	7424199	50K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		8
W152		11/04/2012	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		400
W152		13/12/2013	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		200
W152		14/03/2014	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		200
W152		17/03/2015	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		316
W152		18/04/2017	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11
W152		8/02/2012	795335	7424204	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		100
W152		04/09/2008	795335	7424204	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		2 to 5
W152		13/12/2013	795335	7424204	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
W152		04/09/2008	795335	7424204	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae PST1		2 to 5
W152		22/11/2009	795335	7424204	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		2
W152		21/04/2010	795335	7424204	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		16
W152		05/11/2010	795335	7424204	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		46
W152		08/02/2011	795335	7424204	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae sp. OB_MC		4
W152		17/03/2015	795335	7424204	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)		2
W152		8/02/2011	795335	7424204	50 K	Ostracoda	Candonidae	Ostracoda indet.		1
W152		04/09/2008	795335	7424204	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
W152		22/11/2009	795335	7424204	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		11
W152		21/04/2010	795335	7424204	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		6 to 10
W152		08/02/2011	795335	7424204	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		20
W152		17/03/2015	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris cf. jane</i>		19
W152		04/09/2008	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocarididae	<i>Parastenocaris</i> indet.		1
W152		13/12/2013	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		21
W152		14/03/2014	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		37
W152		22/11/2009	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> jane		3
W152		21/04/2010	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> jane		51 to 100
W152		08/02/2011	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> jane		15

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W152		11/04/2012	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		5
W152		13/12/2013	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		1
W152		14/03/2014	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		7
W152		8/02/2012	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris jane		3
W152		13/12/2013	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB1 (B02)	Parastenocaris 'COP001'	5
W152		21/04/2010	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB1 (B02)	Parastenocaris 'COP001'	76
W152		8/02/2011	795335	7424204	50 K	Copepoda: Harpacticoida	Parastenocaridae	Parastenocaris sp. OB1 (B02)	Parastenocaris 'COP001'	7
W152		11/12/2019	795332	7424199	50 K	Haplotaxida	Phreodrilidae	Phreodrilidae_sp._1		1
W152		11/12/2019	795332	7424199	50 K	Haplotaxida	Phreodrilidae	Phreodrilidae_sp._2		3
W152		14/03/2014	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona colonia		1
W152		22/11/2009	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		3
W152		21/04/2010	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		5
W152		08/02/2011	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		1
W152		11/12/2019	795332	7424199	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		1
W152		11/04/2012	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		6
W152		13/12/2013	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		4
W152		14/03/2014	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		13
W152		18/04/2017	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		10
W152		8/02/2012	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona eberhardi		1
W152		14/03/2014	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona indet.		5
W152		8/02/2012	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona indet.		1
W152		08/02/2011	795335	7424204	50 K	Ostracoda	Candonidae	Pilbaracandona kosmos		2
W152		11/12/2019	795332	7424199	50 K	Haplotaxida	Naididae	Pristina sp. OB		3
W152		21/04/2010	795335	7424204	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
W152		13/12/2013	795335	7424204	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
W152		14/03/2014	795335	7424204	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
W152		17/03/2015	795335	7424204	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		2
W152		13/05/2009	795335	7424204	50 K	Isopoda	Tainisopidae	Pygolabis weeliwolli		1
W152		14/03/2014	795335	7424204	50 K	Platyhelminthes		Turbellaria indet.		2
W152		18/03/2020	795332	7424199	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		100
W152		18/03/2020	795332	7424199	50 K	Amphipoda	Paramelitidae	Paramelitidae sp. OB2 AMP002		1
W152		18/03/2020	795332	7424199	50 K	Haplotaxida	Phreodrilidae	Phreodrilidae_sp._1		1
W152		10/11/2020	795332	7424199	50 K	Amphipoda		Amphipoda indet.		2
W152		10/11/2020	795332	7424199	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		3
W152		13/05/2021	795332	7424199	50 K	Amphipoda	Paramelitidae	Chydaekata acuminata		18
W152		13/05/2021	795332	7424199	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		15
W152		13/05/2021	795332	7424199	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		4
W152		10/11/2020	795332	7424199	50 K	Amphipoda	Paramelitidae	Paramelitidae OB2 AMP002		1
W152		10/11/2020	795332	7424199	50 K	Haplotaxida	Phreodrilidae	Phreodrilidae sp. OB2_sp. 4 (OP2)		9
W152		13/05/2021	795332	7424199	50 K	Isopoda	Tainisopidae	Pygolabis humphreysi		1
W157D		13/05/2009	797847	7427959	50 K	Amphipoda		Amphipoda indet.		1
W178		30/08/2008	782000	7404224	50 K	Ostracoda	Candonidae	Areacandona mulgae		51 to 100
W178		16/03/2015	782000	7404224	50 K	Ostracoda: Podocopida	Candonidae	Notacandona gratia		1
W178		18/03/2014	782000	7404224	50 K	Ostracoda	Candonidae	Notacandona gratia		1
W178		15/05/2009	782000	7404224	50 K	Ostracoda		Ostracoda indet.		51 to 100
W178		30/08/2008	782000	7404224	50 K	Copepoda: Harpacticoida	Parastenocarididae	Parastenocaris indet.		1
W178		30/08/2008	782000	7404224	50 K	Ostracoda	Cyprididae	Stenocypris malcolmsi		1
W179		15/05/2009	782933	7405726	50 K	Amphipoda		Amphipoda indet.		1
W179		15/05/2009	782933	7405726	50 K	Copepoda		Copepoda indet.		1
W179		9/02/2012	782933	7405726	50 K	Copepoda: Cyclopoida	Cyclopidae	Diacyclops humphreysi		2
W179		12/04/2012	782933	7405726	50 K	Acarina	Pezidae	Penza sp. OB	Penza 'ACA001'	2
W179		12/04/2012	782933	7405726	50 K	Isopoda	Stenoniscidae	Stenoniscidae? sp. OB		1
W190		15/05/2009	793838	7409002	50 K	Amphipoda		Amphipoda indet.		11 to 25
W190		30/08/2008	793838	7409002	50 K	Bathynellacea	Parabathynellidae	Atopobathynella indet.		2 to 5
W190		15/05/2009	793838	7409002	50 K	Bathynellacea		Bathynellacea indet.		2 to 5

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	Taxon	WAMinials Name	Abundance
W190		30/08/2008	793838	7409002	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		11
W190		15/05/2009	793838	7409002	50 K	Copepoda		Copepoda indet.		51 to 100
W190		30/08/2008	793838	7409002	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Pescecylops pilbaricus</i>		1
W190		15/05/2009	793838	7409002	50 K	Oligochaeta		Oligochaeta indet.		6 to 10
W190		15/05/2009	793838	7409002	50 K	Ostracoda		Ostracoda indet.		2 to 5
W190		30/08/2008	793838	7409002	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilus</i> indet.		1
W193		13/05/2009	793093	7420474	50 K	Copepoda		Copepoda indet.		6 to 10
W193S		16/05/2009	793143	7420419	50 K	Amphipoda		Amphipoda indet.		2 to 5
W193S		16/05/2009	793143	7420419	50 K	Bathynellacea		Bathynellacea indet.		6 to 10
W193S		02/09/2008	793143	7420419	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		6
W193S		16/05/2009	793143	7420419	50 K	Copepoda		Copepoda indet.		26 to 50
W193S		02/09/2008	793143	7420419	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
W193S		16/05/2009	793143	7420419	50 K	Oligochaeta		Oligochaeta indet.		6 to 10
W193S		16/05/2009	793143	7420419	50 K	Ostracoda		Ostracoda indet.		1
W213		13/05/2009	797738	7432807	50 K	Copepoda		Copepoda indet.		1
W213		13/05/2009	797738	7432807	50 K	Ostracoda		Ostracoda indet.		2 to 5
W214		16/05/2009	797572	7425844	50 K	Bathynellacea		Bathynellacea indet.		1
W214		16/05/2009	797572	7425844	50 K	Copepoda		Copepoda indet.		101 to 500
W214		16/05/2009	797572	7425844	50 K	Ostracoda		Ostracoda indet.		51 to 100
W216		16/05/2009	798891	7430304	50 K	Amphipoda		Amphipoda indet.		1
W216		16/05/2009	798891	7430304	50 K	Copepoda		Copepoda indet.		51 to 100
W226		16/05/2009	797017	7425857	50 K	Amphipoda		Amphipoda indet.		1
W226		04/09/2008	797017	7425857	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		26 to 50
W226		16/05/2009	797017	7425857	50 K	Oligochaeta		Oligochaeta indet.		1
W226		16/05/2009	797017	7425857	50 K	Ostracoda		Ostracoda indet.		11 to 25
W226		04/09/2008	797017	7425857	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilus</i> indet.		2 to 5
W226		04/09/2008	797017	7425857	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		6
W226		04/09/2008	797017	7425857	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Stygonitocrella bispinosa</i>		1
W228		10/02/2012	797354	7429821	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		1
W229 / HEOP0468		14/03/2014	793400	7430867	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopidae indet.		1
W229 / HEOP0468		14/04/2012	793400	7430867	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
W229 / HEOP0468		27/08/2008	793400	7430867	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		1
W231		14/03/2014	797328	7429823	50 K	Bathynellacea	Parabathynellidae	<i>Brevisomabathynella</i> indet.		1
W231		27/08/2008	798323	7429829	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
W231		16/05/2009	797328	7429823	50 K	Copepoda		Copepoda indet.		2 to 5
W231		14/12/2013	797328	7429823	50 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		2
W231		14/03/2014	797328	7429823	50 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		2
W231		14/04/2012	797328	7429823	50 K	Ostracoda	Candonidae	<i>Notocandona gratia</i>		1
W231		16/05/2009	797328	7429823	50 K	Ostracoda		Ostracoda indet.		2 to 5
W231		14/03/2014	797328	7429823	50 K	Platyhelminthes		Turbellaria indet.		10
W231		18/04/2017	-23.21389	119.90497	50 K					0
W236		14/05/2009	791939	7418257	50 K	Ostracoda		Ostracoda indet.		11 to 25
W244		16/05/2009	798631	7429292	50 K	Bathynellacea		Bathynellacea indet.		1
W244		16/05/2009	798631	7429292	50 K	Copepoda		Copepoda indet.		1
W247 / HEOP0559		13/05/2009	795402	7416424	50 K	Copepoda		Copepoda indet.		26 to 50
W247 / HEOP0559		21/11/2009	795402	7416424	50 K	Isopoda	Microceberidae	<i>Coxicerberus</i> sp. OB1	<i>Coxicerberus</i> 'ISO019'	2 to 5
W247 / HEOP0559		4/11/2010	795402	7416424	50 K	Isopoda	Microceberidae	<i>Coxicerberus</i> sp. OB1	<i>Coxicerberus</i> 'ISO019'	2
W247 / HEOP0559		04/11/2010	795402	7416424	50 K	Isopoda	Microceberidae	<i>Coxicerberus</i> sp. OB1	<i>Coxicerberus</i> 'ISO019'	2 to 5
W247 / HEOP0559		12/04/2012	795402	7416424	50 K	Isopoda	Microceberidae	<i>Coxicerberus</i> sp. OB1	<i>Coxicerberus</i> 'ISO019'	2
W247 / HEOP0559		21/11/2009	795402	7416424	50 K	Isopoda	Microceberidae	<i>Coxicerberus</i> sp. OB1	<i>Coxicerberus</i> 'ISO019'	3
W247 / HEOP0559		13/12/2013	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	Cyclopoida indet.		5
W247 / HEOP0559		21/11/2009	795402	7416424	50 K	Ostracoda	Cyprididae	Cyprididae indet.		4
W247 / HEOP0559		21/11/2009	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		51 to 100
W247 / HEOP0559		02/09/2008	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
W247 / HEOP0559		21/04/2010	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		20

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	Taxon	WAMinals Name	Abundance
W247 / HEOP0559		21/04/2010	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11 to 25
W247 / HEOP0559		4/11/2010	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		3
W247 / HEOP0559		04/11/2010	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
W247 / HEOP0559		8/02/2011	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		16
W247 / HEOP0559		08/02/2011	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11 to 25
W247 / HEOP0559		8/02/2012	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		50
W247 / HEOP0559		12/04/2012	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		150
W247 / HEOP0559		13/12/2013	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		19
W247 / HEOP0559		12/12/2014	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		5
W247 / HEOP0559		21/11/2009	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		53
W247 / HEOP0559		13/12/2013	795402	7416424	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		3
W247 / HEOP0559		02/09/2008	795402	7416424	50 K	Isopoda		Isopoda indet.		1
W247 / HEOP0559		13/12/2013	795402	7416424	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		4
W247 / HEOP0559		21/11/2009	795402	7416424	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		2 to 5
W247 / HEOP0559		12/04/2012	795402	7416424	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		13
W247 / HEOP0559		13/12/2013	795402	7416424	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		1
W247 / HEOP0559		21/11/2009	795402	7416424	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		4
W247 / HEOP0559		4/11/2010	795402	7416424	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	1
W247 / HEOP0559		04/11/2010	795402	7416424	50 K	Acarina	Pezidae	<i>Penza</i> sp. OB	<i>Penza</i> 'ACA001'	1
W247 / HEOP0559		21/11/2009	795402	7416424	50 K	Ostracoda	Cyprididae	<i>Sarscypridopsis ochracea</i>		2 to 5
W251		15/03/2014	794712	7423019	50 K	Aphanoneura	Aeolosomatidae	<i>Aeolosoma</i> sp. OB		2
W251		16/05/2009	794712	7423019	50 K	Amphipoda		Amphipoda indet.		11 to 25
W251		15/12/2013	794712	7423019	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		150
W251		15/03/2014	794712	7423019	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		250
W251		15/12/2013	794712	7423019	50 K	Ostracoda	Candonidae	<i>Candoninae</i> indet.		4
W251		15/03/2014	794712	7423019	50 K	Ostracoda	Candonidae	<i>Candoninae</i> indet.		10
W251		15/12/2013	794712	7423019	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		1
W251		15/03/2014	794712	7423019	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		8
W251		15/03/2014	794712	7423019	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet. OB		24
W251		16/05/2009	794712	7423019	50 K	Copepoda		Copepoda indet.		101 to 500
W251		15/12/2013	794712	7423019	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops cockingi</i>		2
W251		15/03/2014	794712	7423019	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops cockingi</i>		10
W251		15/12/2013	794712	7423019	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		5
W251		15/03/2014	794712	7423019	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		50
W251		15/03/2014	794712	7423019	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		30
W251		15/03/2014	794712	7423019	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops</i> sp.		10
W251		15/12/2013	794712	7423019	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1
W251		04/09/2008	794712	7423019	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae PST1		2 to 5
W251		16/05/2009	794712	7423019	50 K	Copepoda: Harpacticoida		Harpacticoida indet.		2 to 5
W251		15/03/2014	794712	7423019	50 K	Oligochaeta	Naididae	Naididae indet.		1
W251		16/05/2009	794712	7423019	50 K	Oligochaeta		Oligochaeta indet.		51 to 100
W251		16/05/2009	794712	7423019	50 K	Ostracoda		Ostracoda indet.		51 to 100
W251		04/09/2008	794712	7423019	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		6 to 10
W251		15/12/2013	794712	7423019	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB3	<i>Paramelitidae</i> n. Gen. 2 'AMP003'	4
W251		15/03/2014	794712	7423019	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> sp. OB3	<i>Paramelitidae</i> n. Gen. 2 'AMP003'	11
W251		15/03/2014	794712	7423019	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		3
W251		15/03/2014	794712	7423019	50 K	Ostracoda	Candonidae	<i>Pilbaracandona colonia</i>		2
W251		15/12/2013	794712	7423019	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		17
W251		15/03/2014	794712	7423019	50 K	Ostracoda	Candonidae	<i>Pilbaracandona eberhardi</i>		50
W251		15/12/2013	794712	7423019	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		2
W251		15/03/2014	794712	7423019	50 K	Ostracoda	Candonidae	<i>Pilbaracandona kosmos</i>		14
W251		16/05/2009	794712	7423019	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W251		15/12/2013	794712	7423019	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
W251		15/03/2014	794712	7423019	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		21
W260		16/05/2009	793570	7421248	50 K	Amphipoda		Amphipoda indet.		11 to 25

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W260		16/05/2009	793570	7421248	50 K	Copepoda		Copepoda indet.		51 to 100
W260		04/09/2008	793568	7421251	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		2 to 5
W260		04/09/2008	793568	7421251	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Pescecylops pilbaricus</i>		2 to 5
W260		04/09/2008	793568	7421251	50 K	Oligochaeta	Naididae	<i>Naididae poss1/1Aor5</i>		26 to 50
W260		16/05/2009	793570	7421248	50 K	Oligochaeta		Oligochaeta indet.		11 to 25
W260		16/05/2009	793570	7421248	50 K	Ostracoda		Ostracoda indet.		26 to 50
W260		04/09/2008	793568	7421251	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		6 to 10
W260		16/05/2009	793570	7421248	50 K	Isopoda	Tainisopidae	<i>Pygolabis weeliwolli</i>		11
W273 / HEOP0585		01/09/2008	791080	7418453	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		2
W273 / HEOP0585		01/09/2008	791080	7418453	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		11
W275		01/09/2008	789495	7416997	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		2
W275		01/09/2008	789495	7416997	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilus ?peniculus</i>		1
W276		12/05/2009	789496	7416974	50 K	Amphipoda		Amphipoda indet.		26 to 50
W276		01/09/2008	789496	7416974	50 K	Amphipoda	Paramelitidae	<i>Chydaekata</i> indet.		2
W276		12/05/2009	789496	7416974	50 K	Copepoda		Copepoda indet.		26 to 50
W276		01/09/2008	789496	7416974	50 K	Oligochaeta	Phreodrilidae	<i>Insulodrilus WA31</i>		1
W276		12/05/2009	789496	7416974	50 K	Isopoda		Isopoda indet.		2 to 5
W276		12/05/2009	789496	7416974	50 K	Oligochaeta		Oligochaeta indet.		1
W276		01/09/2008	789496	7416974	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
WB23-32 / HEA0224		26/08/2008	791714	7418659	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
WBGW0050D		24/09/2009	774911	7417474	50 K	Copepoda		Copepoda indet.		6 to 10
WBGW0050D		24/09/2009	774911	7417474	50 K	Isopoda	Tainisopidae	<i>Pygolabis weeliwolli</i>		1
WBGW007		24/09/2009	776651	7414100	50 K	Copepoda		Copepoda indet.		6 to 10
WBGW007		20/01/2010	776651	7414100	50 K	Copepoda		Copepoda indet.		2 to 5
WBGW007		20/01/2010	776651	7414100	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
WBGW010		24/09/2009	777878	7416420	50 K	Amphipoda		Amphipoda indet.		2 to 5
WBGW010		20/01/2010	777878	7416420	50 K	Amphipoda		Amphipoda indet.		11 to 25
WBGW010		20/01/2010	777878	7416420	50 K	Bathynellacea		Bathynellacea indet.		2 to 5
WBGW010		24/09/2009	777878	7416420	50 K	Bathynellacea	Bathynellidae	Bathynellidae indet.		2 to 5
WBGW010		24/09/2009	777878	7416420	50 K	Copepoda		Copepoda indet.		26 to 50
WBGW010		20/01/2010	777878	7416420	50 K	Copepoda		Copepoda indet.		6 to 10
WBGW010		20/01/2010	777878	7416420	50 K	Oligochaeta		Oligochaeta indet.		6 to 10
WBGW010		24/09/2009	777878	7416420	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
WBGW010		24/09/2009	777878	7416420	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
WBGW019D		23/09/2009	775009	7416405	50 K	Copepoda		Copepoda indet.		11 to 25
WBGW045D		20/01/2010	776240	7417036	50 K	Amphipoda		Amphipoda indet.		1
WBGW045D		23/09/2009	776240	7417036	50 K	Copepoda		Copepoda indet.		501 to 1000
WBGW045D		20/01/2010	776240	7417036	50 K	Copepoda		Copepoda indet.		101 to 500
WBGW045D		23/09/2009	776240	7417036	50 K	Bathynellacea	Parabathynellidae	Notobathynella indet.		2 to 5
WBGW045D		20/01/2010	776240	7417036	50 K	Bathynellacea	Parabathynellidae	Notobathynella indet.		2 to 5
WBGW045D		20/01/2010	776240	7417036	50 K	Oligochaeta		Oligochaeta indet.		2 to 5
WBGW045D		23/09/2009	776240	7417036	50 K	Ostracoda		Ostracoda indet.		26 to 50
WBGW045D		20/01/2010	776240	7417036	50 K	Ostracoda		Ostracoda indet.		2 to 5
WJR001		25/11/2008	809948	7410488	51 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		11 to 25
WP116		16/05/2009	797480	7426205	50 K	Amphipoda		Amphipoda indet.		2 to 5
WP116		16/05/2009	797480	7426205	50 K	Bathynellacea		Bathynellacea indet.		2 to 5
WP116		16/05/2009	797480	7426205	50 K	Copepoda		Copepoda indet.		11 to 25
WP116		16/05/2009	797480	7426205	50 K	Ostracoda		Ostracoda indet.		1
WP117		16/05/2009	797051	7426357	50 K	Amphipoda		Amphipoda indet.		1
WP117		16/05/2009	797051	7426357	50 K	Bathynellacea		Bathynellacea indet.		1
WP117		16/05/2009	797051	7426357	50 K	Copepoda		Copepoda indet.		501 to 1000
WP117		16/05/2009	797051	7426357	50 K	Oligochaeta		Oligochaeta indet.		51 to 100
WP117		16/05/2009	797051	7426357	50 K	Ostracoda		Ostracoda indet.		2 to 5
WP122		16/05/2009	796548	7425026	50 K	Amphipoda		Amphipoda indet.		51 to 100
WP122		16/05/2009	796548	7425026	50 K	Bathynellacea		Bathynellacea indet.		1

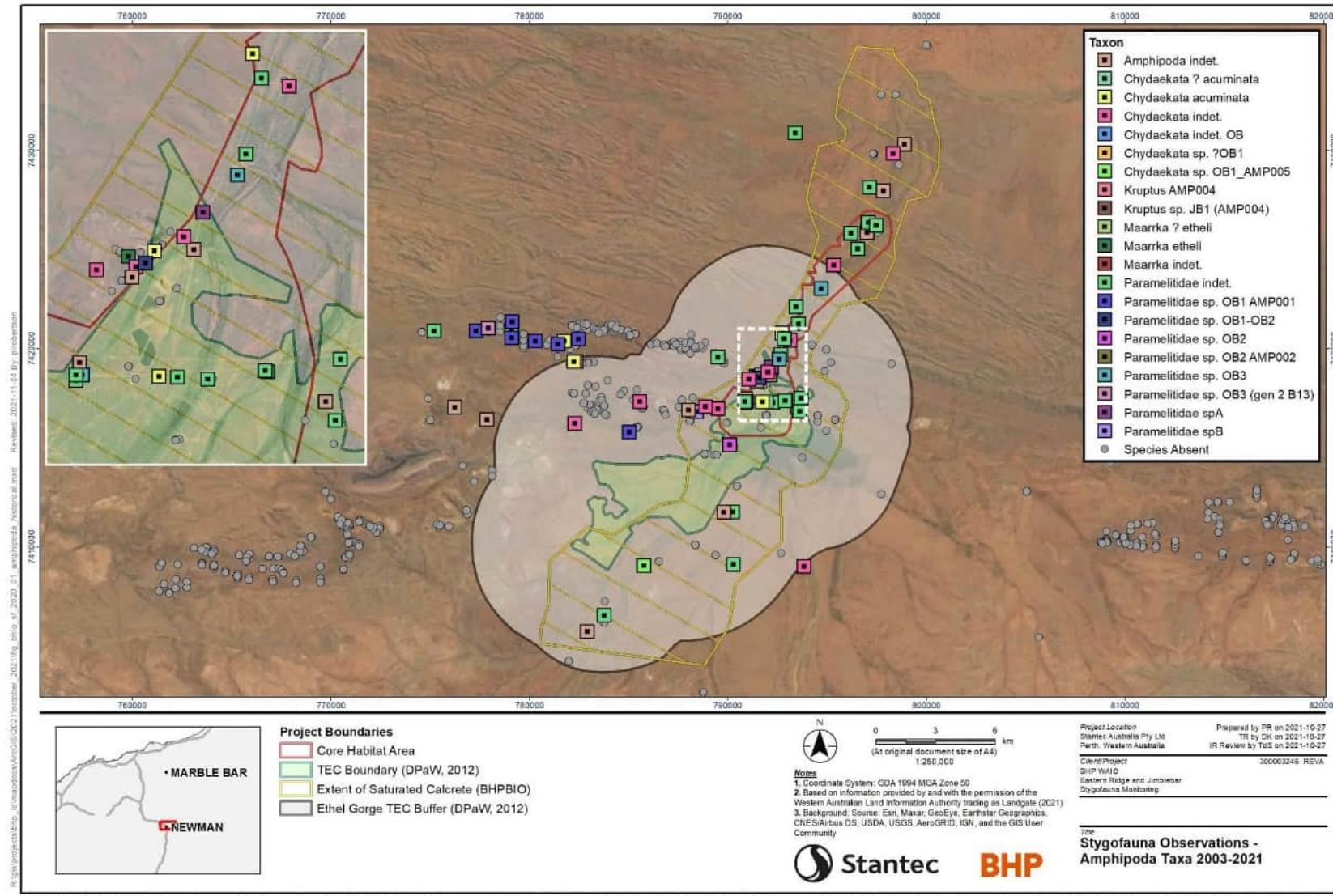
Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	TAXON	WAMinals Name	Abundance
WP122		16/05/2009	796548	7425026	50 K	Copepoda		Copepoda indet.		>1000
WP122		16/05/2009	796548	7425026	50 K	Oligochaeta		Oligochaeta indet.		1
WP122		04/09/2008	796549	7425024	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		11 to 25
WP122		04/09/2008	796549	7425024	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		11 to 25
WP122		04/09/2008	796549	7425024	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
WP126NRE		21/11/2009	796221	7425806	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		15
WP126NRE		21/11/2009	796221	7425806	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		7
WP126NRE		21/11/2009	796221	7425806	50 K	Ostracoda	Limnocytheridae	<i>Gomphodella hirsuta</i>		1
WP126NRE		21/11/2009	796221	7425806	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Nitocrella karanovici</i> (B08)	<i>Nitocrella 'COP003'</i>	2
WP126NRE		21/11/2009	796221	7425806	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Orbuscyclops westaustraliensis</i>		1
WP126NRE		21/11/2009	796221	7425806	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		6 to 10
WP126NRE		21/11/2009	796221	7425806	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		2
WP126NRE		21/11/2009	796221	7425806	50 K	Oligochaeta	Naididae	<i>Pristina</i> sp. OB		8
WP131		21/04/2010	797151	7428137	50 K	Bathynellacea	Parabathynellidae	<i>Brevisomabathynella cf. pilbaraensis</i>		2
WP131		21/04/2010	797151	7428137	50 K	Bathynellacea	Parabathynellidae	<i>Brevisomabathynella pilbaraensis</i>		2 to 5
WP131		21/04/2010	797151	7428137	50 K	Amphipoda	Paramelitidae	<i>Chydaekata acuminata</i>		10
WP131		21/11/2009	797151	7428137	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		32
WP131		21/04/2010	797151	7428137	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		700
WP131		21/11/2009	797151	7428137	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		3
WP131		21/04/2010	797151	7428137	50 K	Oligochaeta	Enchytraeidae	<i>Enchytraeidae</i> sp. OB_MC		4
WP131		21/11/2009	797151	7428137	50 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		30
WP131		21/04/2010	797151	7428137	50 K	Ostracoda	Candonidae	<i>Notacandona gratia</i>		400
WP131		21/11/2009	797151	7428137	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Orbuscyclops westaustraliensis</i>		1
WP131		21/04/2010	797151	7428137	50 K	Amphipoda	Paramelitidae	Paramelitidae indet.		6 to 10
WP131		21/11/2009	797151	7428137	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		30
WP131		21/04/2010	797151	7428137	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		303
WP131		21/04/2010	797151	7428137	50 K	Oligochaeta	Phreodrilidae	<i>Phreodrilidae</i> sp. OB1		6
WP131		21/04/2010	797151	7428137	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
WP23-11i / HEA0119		15/04/2012	791504	7418473	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> sp. OB1 (B02)	<i>Parastenocaris 'COP001'</i>	1
WP23-11i / HEA0119		4/11/2010	791504	7418473	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		2
WP23-11i / HEA0119		04/11/2010	791504	7418473	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		2 to 5
WP23-11i / HEA0119		17/03/2014	791504	7418473	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		1
WP23-12i		14/12/2013	791351	7418337	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		70
WP23-12i		17/03/2014	791351	7418337	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		40
WP23-12i		17/03/2014	791351	7418337	50 K	Oligochaeta	Naididae	Naididae indet.		1
WP23-12i		15/04/2012	791351	7418337	50 K	Nematoda		Nematoda indet.		2
WP23-12i		17/03/2014	791351	7418337	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris</i> indet.		4
WP23-12i		11/02/2012	791351	7418337	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		30
WP23-12i		15/04/2012	791351	7418337	50 K	Copepoda: Harpacticoida	Parastenocaridae	<i>Parastenocaris jane</i>		16
WP23-12i		04/11/2010	791351	7418337	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		2
WP23-12i		10/02/2011	791351	7418337	50 K	Oligochaeta	Phreodrilidae	Phreodrilidae indet.		4
WP23-22S / HEA0138		27/08/2008	792221	7419067	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
WP23-22S / HEA0138		27/08/2008	792221	7419067	50 K	Amphipoda	Paramelitidae	<i>Paramelitidae</i> spA		2 to 5
WP23-23		27/08/2008	791870	7418860	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11 to 25
WP23-26 / HEA0144		23/08/2008	791334	7418635	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		11 to 25
WP236		28/08/2008	791754	7418119	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		2 to 5
WP23-9S / HEA0114		28/08/2008	792013	7418810	50 K	Copepoda: Harpacticoida	Ameiridae	<i>Archinitocrella newmanensis</i>		2 to 5
WP23-9S / HEA0114		28/08/2008	792013	7418810	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		1
WP23-9S / HEA0114		28/08/2008	792013	7418810	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops humphreysi</i>		6 to 10
WP23-9S / HEA0114		28/08/2008	792013	7418810	50 K	Copepoda: Cyclopoida	Cyclopidae	<i>Diacyclops sobeprolatus</i>		1
WP25/14 / HEC0117		26/08/2008	788868	7417073	50 K	Amphipoda	Paramelitidae	Chydaekata indet.		2
WP275		12/05/2009	789497	7417002	50 K	Oligochaeta		Oligochaeta indet.		6 to 10
WP275		04/11/2010	789497	7417002	50 K	Isopoda	Tainisopidae	<i>Pygolabis humphreysi</i>		1
WP275		12/05/2009	789497	7417002	50 K	Isopoda	Tainisopidae	<i>Pygolabis weeliwolli</i>		1
WPP3-1 / EES0501		24/08/2003	788027	7416903	50 K	Amphipoda		Amphipoda indet.		1

Bore Code	Previous Bore Code	Sample Date	Easting (GDA)	Northing (GDA)	Map Zone	Group	Family	Taxon	WAMinials Name	Abundance
WPP3-1 / EES0501		24/08/2003	788027	7416903	50 K	Amphipoda		Amphipoda indet.		2 to 5
WPP3-1 / EES0501		24/08/2003	788027	7416903	50 K	Isopoda		Isopoda indet.		1
WPP3-1 / EES0501		24/08/2003	788027	7416903	50 K	Isopoda		Isopoda indet.		6 to 10
WPP3-3D		10/02/2011	788162	7416862	50 K	Copepoda: Cyclopoida	Cyclopoidae	<i>Diacyclops humphreysi</i>		1
WPP3-3D		21/11/2009	788162	7416862	50 K	Ostracoda	Cyprididae	<i>Ilyodromus</i> indet.		1
WPP3-3D		21/11/2009	788162	7416862	50 K	Ostracoda	Candonidae	<i>Ostracoda</i> sp. UNK8		1
WPP3-4S		24/08/2003	787918	7416717	50 K	Copepoda		Copepoda indet.		11 to 25
YOB-010		27/11/2008	818499	7411105	50 K	Oligochaeta	Enchytraeidae	Enchytraeidae indet.		1

Appendix G Core Species for Diversity Analysis

Group	Taxa included in species diversity analyses	
	Broader Ethel Gorge area	MZ 1
Amphipoda	Amphipoda sp. indet.	Amphipoda sp. indet.
	<i>Chydaekata acuminata</i>	<i>Chydaekata acuminata</i>
	<i>Chydaekata</i> indet.	<i>Chydaekata</i> indet.
	<i>Chydaekata</i> sp. OB1_AMP005	<i>Chydaekata</i> sp. OB1_AMP005
	Kruptus AMP004	
	Maarrka sp. OB3_AMP003	Maarrka sp. OB3_AMP003
	Maarrka etheli	Maarrka etheli
	Paramelitidae indet.	Paramelitidae indet.
	Paramelitidae-sp. OB1_AMP001	
	Paramelitidae sp. OB1-OB2	Paramelitidae sp. OB1-OB2
	Paramelitidae-sp. OB2_AMP002	Paramelitidae-sp. OB2_AMP002
Bathynellacea	Bathynellidae indet.	Bathynellidae indet.
	Bathynellidae sp. OB1	Bathynellidae sp. OB1
	Bathynellidae sp. OB2	Bathynellidae sp. OB2
	Bathynellidae-WAMindet_1	
	Bathynellidae-WAMindet_2	
	<i>Billibathynella cassidis</i>	
	<i>Billibathynella</i> indet.	
	<i>Billibathynella</i> sp. OB1	<i>Billibathynella</i> sp. OB1
	<i>Brevisomabathynella</i> cf. <i>pilbaraensis</i>	<i>Brevisomabathynella</i> cf. <i>pilbaraensis</i>
	<i>Brevisomabathynella</i> indet.	<i>Brevisomabathynella</i> indet.
	<i>Brevisomabathynella pilbaraensis</i>	<i>Brevisomabathynella pilbaraensis</i>
	<i>Pilbaranella ethelensis</i>	<i>Pilbaranella ethelensis</i>
	<i>Pilbaranella</i> sp. B	<i>Pilbaranella</i> sp. B
	<i>Pilbaranella</i> sp.	
Copepoda: Cyclopoida	Anzcyclops sp. B06	Anzcyclops sp. B06
	nr. <i>Pilbaracyclops</i> sp. OB	nr. <i>Pilbaracyclops</i> sp. OB
	<i>Pilbaracyclops supersensus</i>	<i>Pilbaracyclops supersensus</i>
Copepoda: Harpacticoida	<i>Nitocrella karanovici</i>	<i>Nitocrella karanovici</i>
	<i>Parastenocaris</i> cf. <i>jane</i>	<i>Parastenocaris</i> cf. <i>jane</i>
	<i>Parastenocaris</i> sp. OB1	<i>Parastenocaris</i> sp. OB1
	<i>Parastenocaris</i> sp. OB2	<i>Parastenocaris</i> sp. OB2
Isopoda	Microcerberidae sp. OB	Microcerberidae sp. OB
	<i>Coxicerberus</i> sp. OB2	<i>Coxicerberus</i> sp. OB2
	<i>Pygolabis humphreysi</i>	<i>Pygolabis humphreysi</i>
Oligochaeta	<i>Pristina</i> sp. OB	<i>Pristina</i> sp. OB
	<i>Phreodrilidae</i> sp. OB2_sp. 4 (OP2)	<i>Phreodrilidae</i> sp. OB2_sp. 4 (OP2)
	<i>Phreodrilidae</i> sp. OP1	
	Phreodrilidae WAMindet_1	
Ostracoda	<i>Notacandona gratia</i>	<i>Notacandona gratia</i>
	<i>Origocandona</i> 'BOS099'	<i>Origocandona</i> 'BOS099'
	<i>Pilbaracandona eberhardi</i>	<i>Pilbaracandona eberhardi</i>
	<i>Pilbaracandona kosmos</i>	<i>Pilbaracandona kosmos</i>
	<i>Pilbaracandona nr temporaria</i>	<i>Pilbaracandona nr temporaria</i>
	<i>Pilbaracandona</i> OB1	<i>Pilbaracandona</i> OB1
	<i>Pilbaracandona</i> OB2	<i>Pilbaracandona</i> OB2

Appendix H Distribution of Stygofauna recorded from BHPIO surveys within the Newman region from 2003 to May 2021



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Figure H 1: The distribution of Amphipoda recorded between 2003 and May 2021.

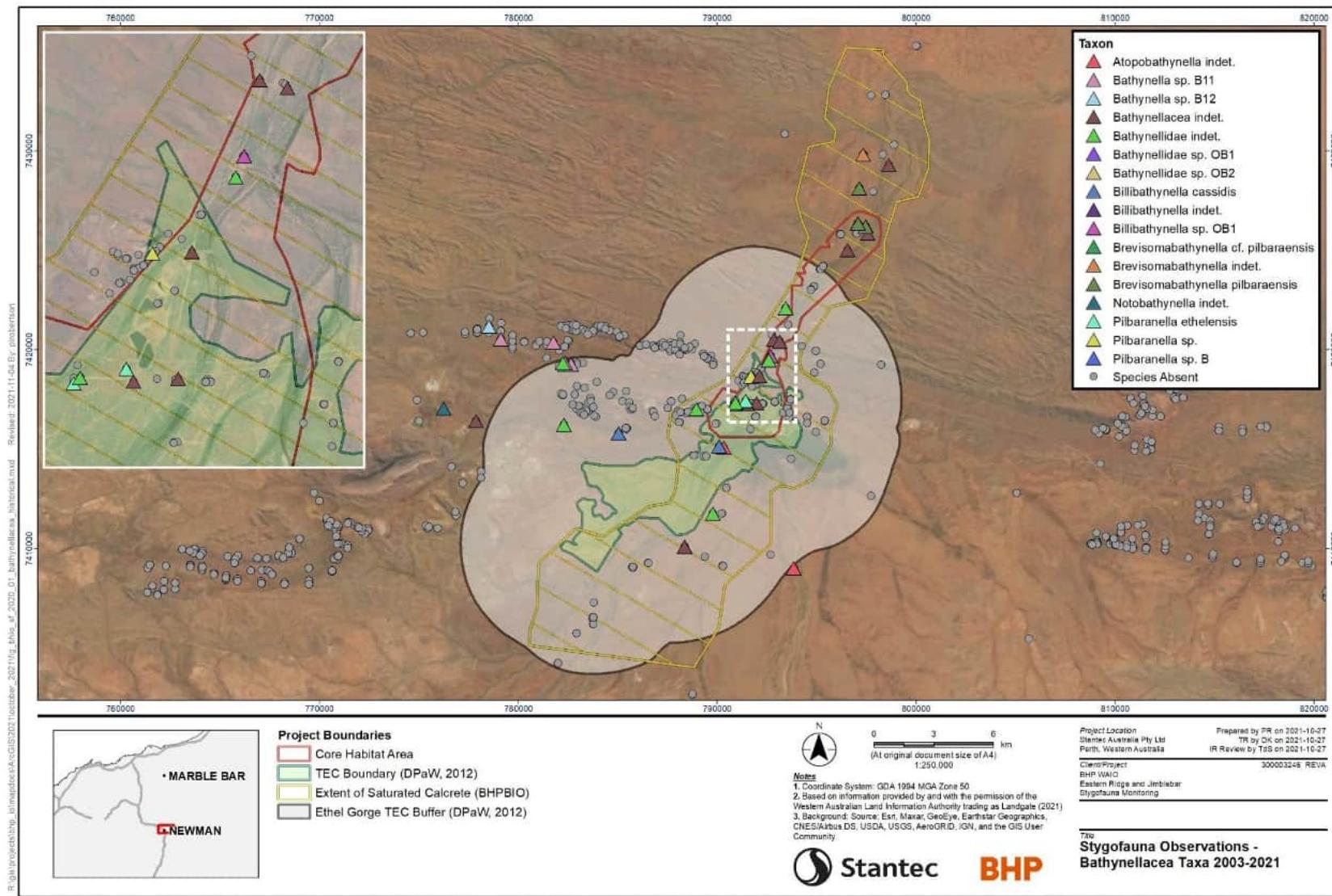
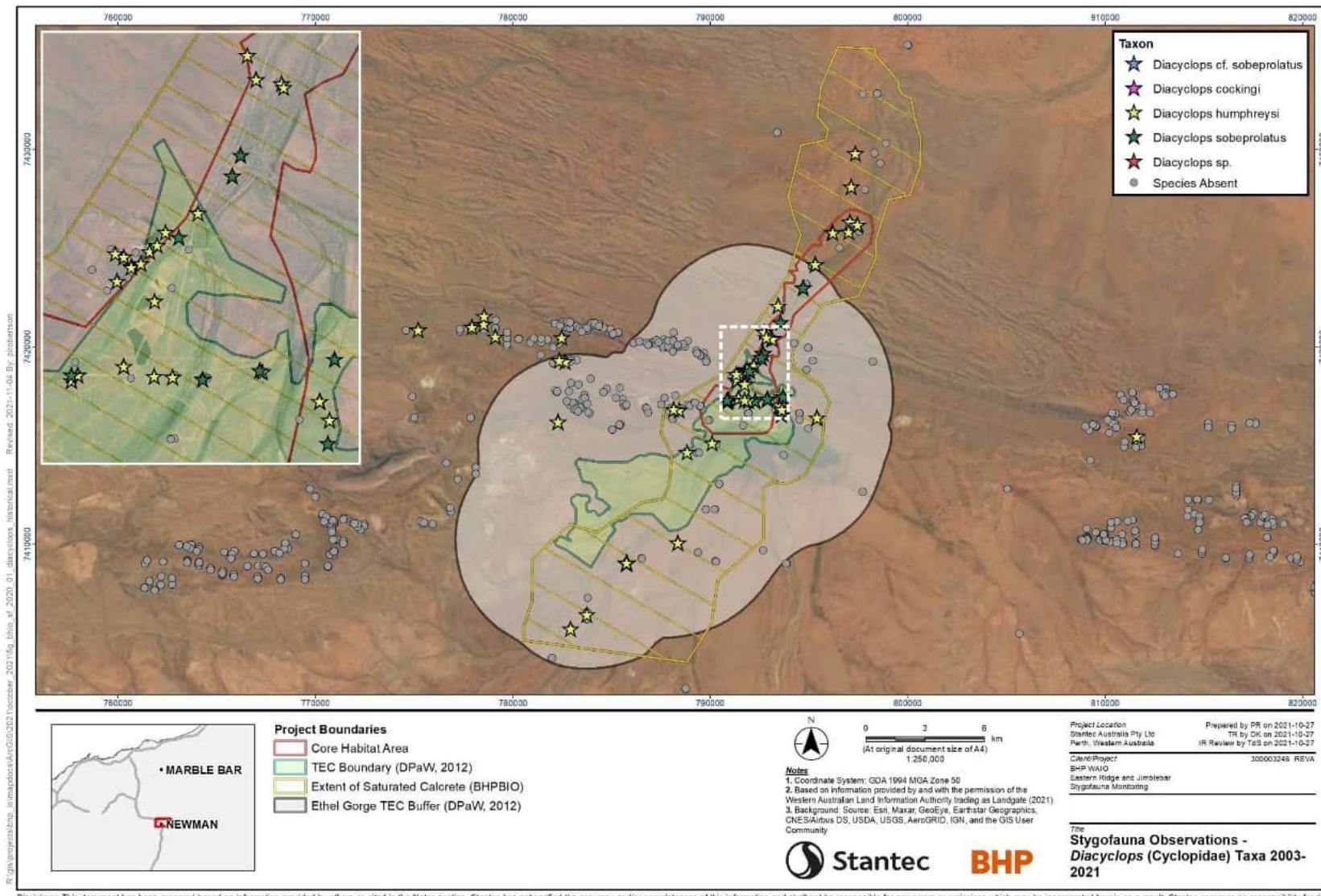


Figure H 2: The distribution of Bathynellacea recorded between 2003 and May 2021.



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Figure H 3: The distribution of *Diacyclops* taxa recorded between 2003 and May 2021.

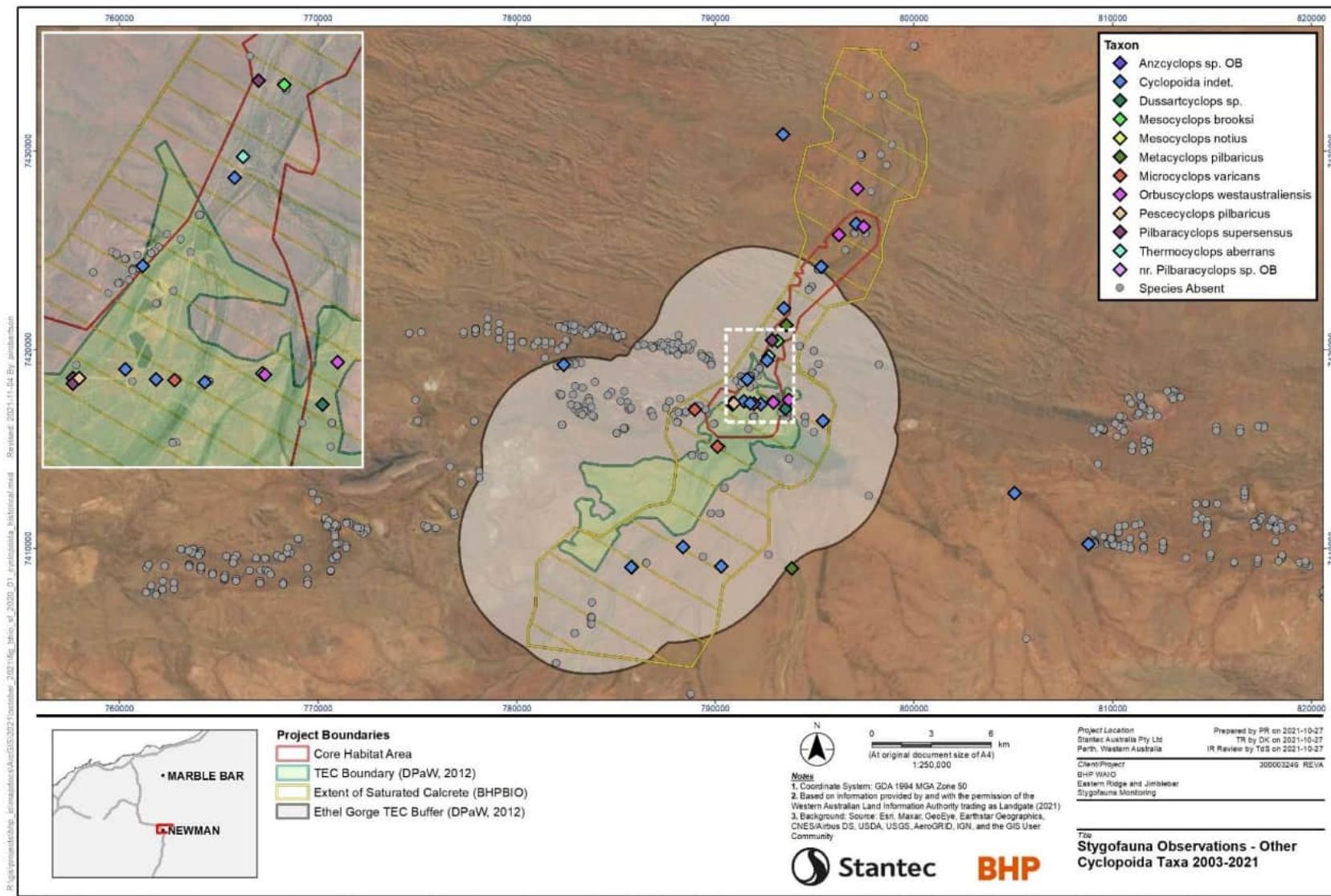


Figure H 4: The distribution of Non Diacyclops (Cyclopoida) taxa recorded between 2003 and May 2021.

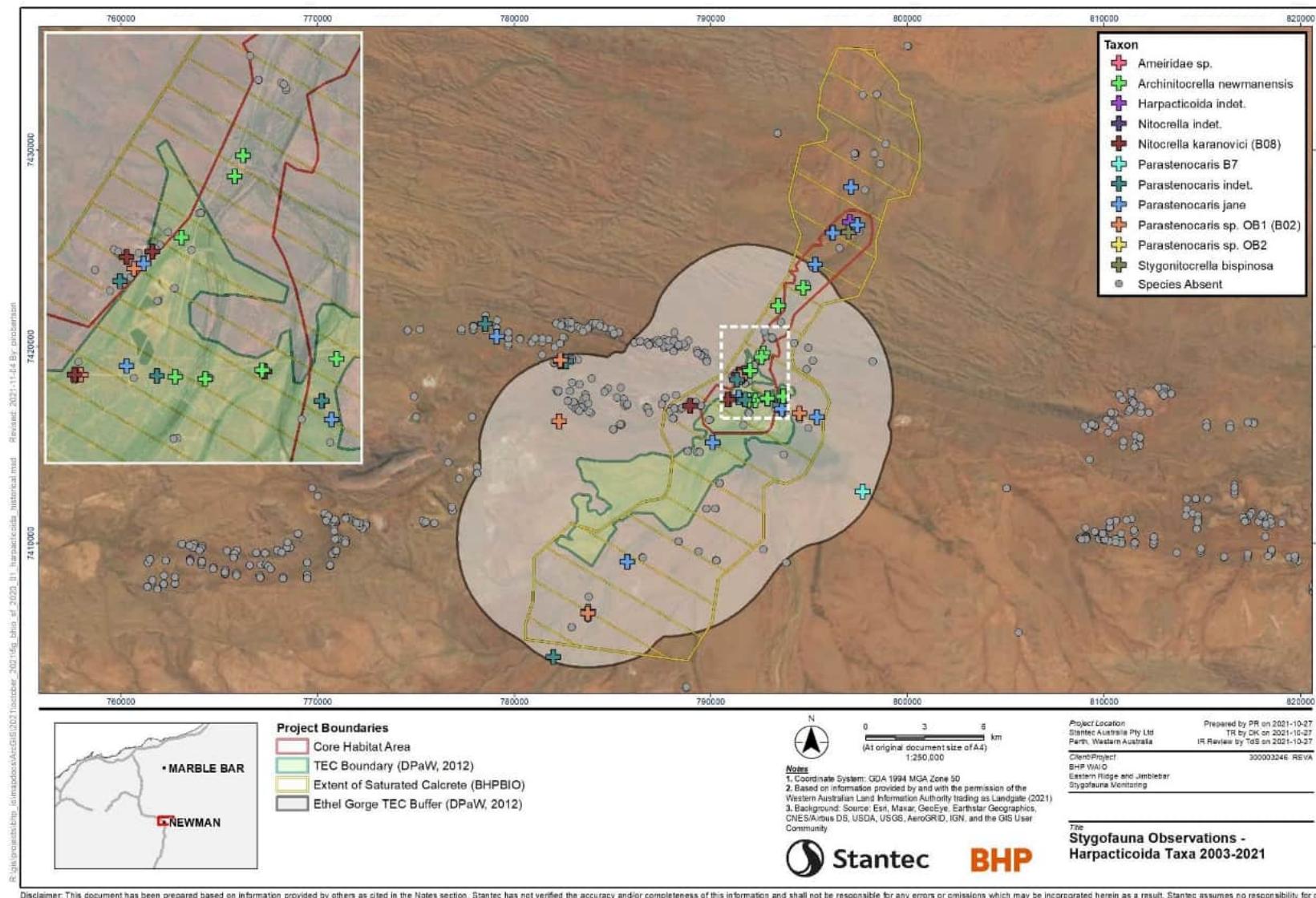
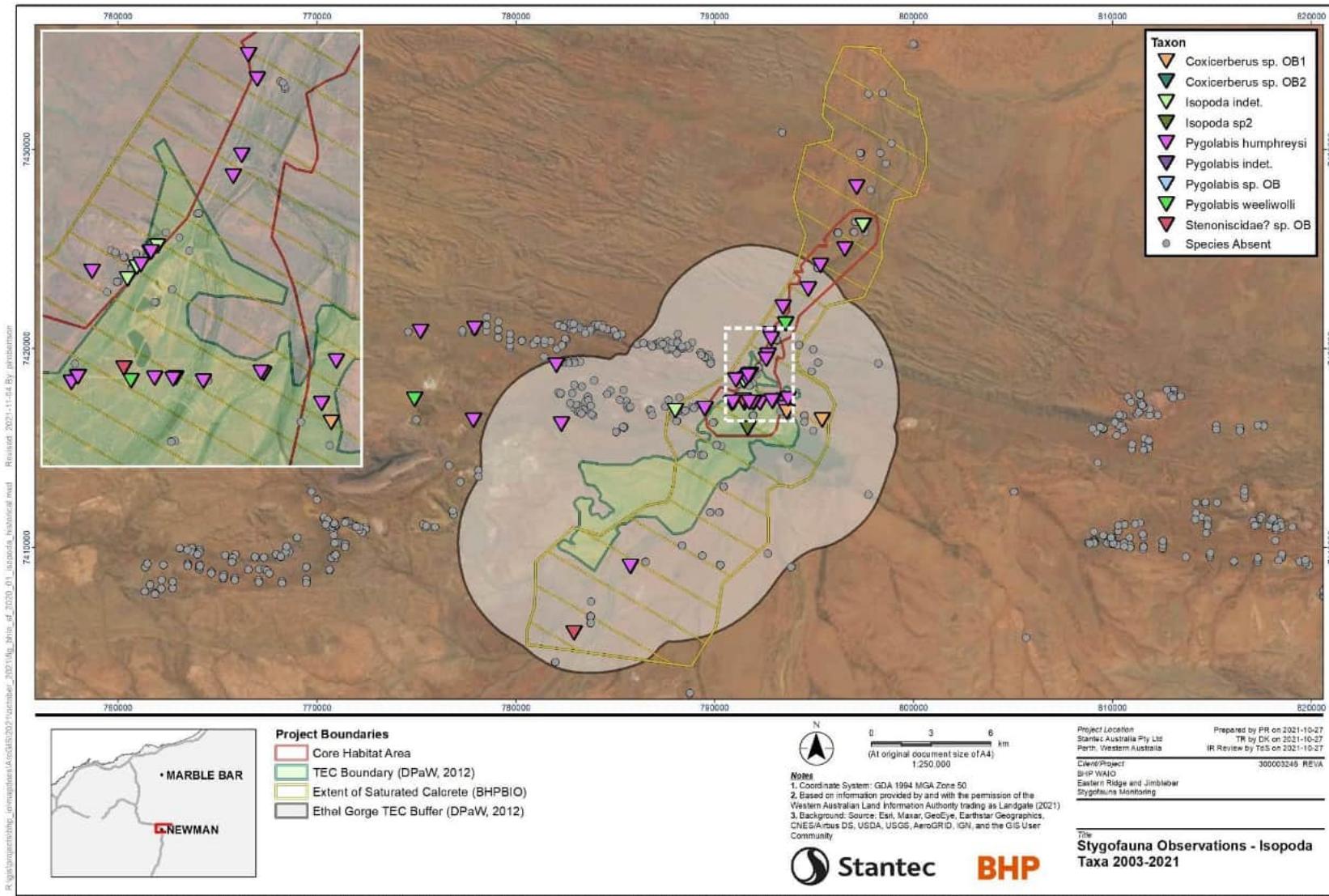


Figure H 5: The distribution of Harpacticoida recorded between 2003 and May 2021.



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Figure H 6: The distribution of Isopoda recorded between 2003 and May 2021.

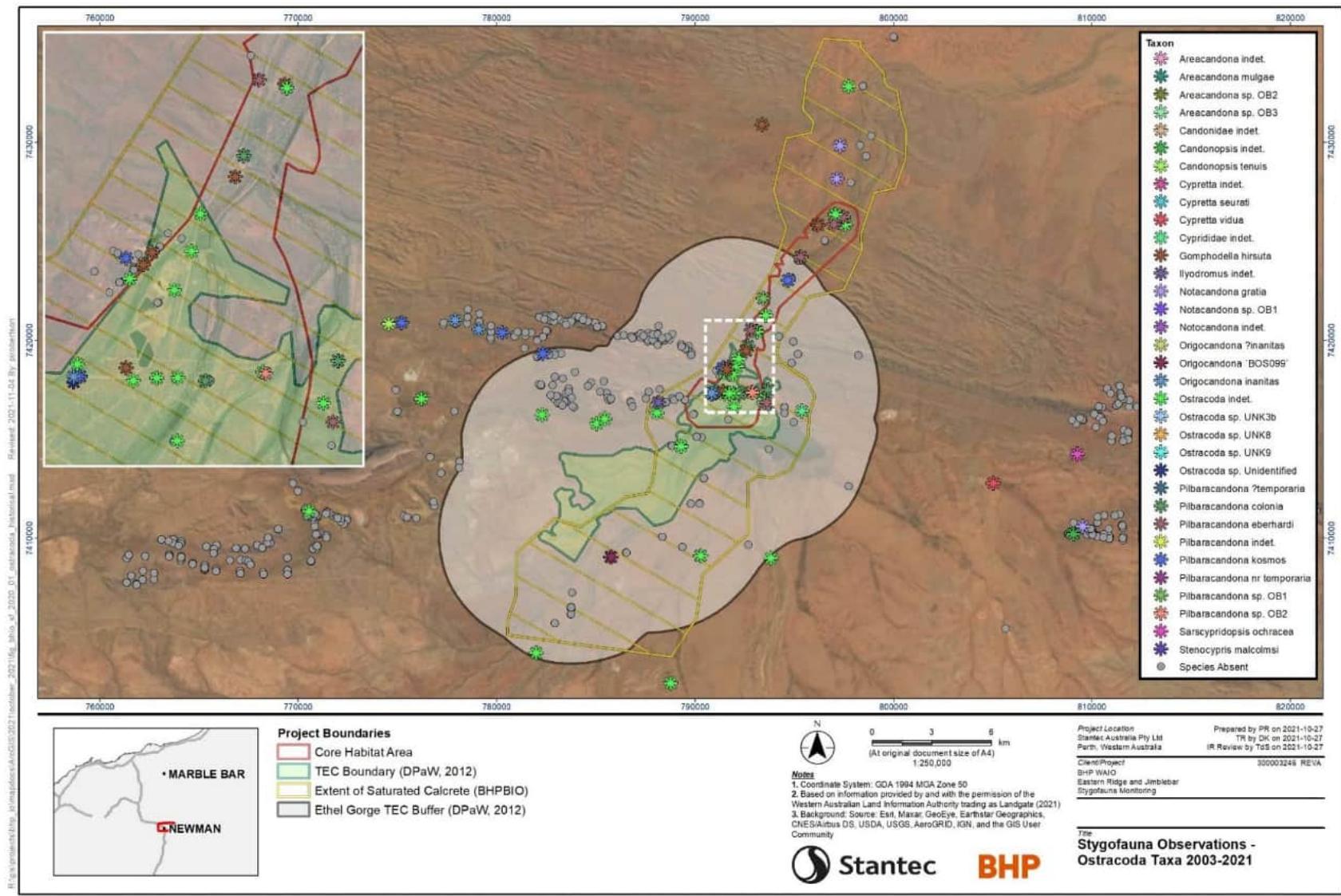


Figure H 7: The distribution of Ostracoda recorded between 2003 and May 2021.

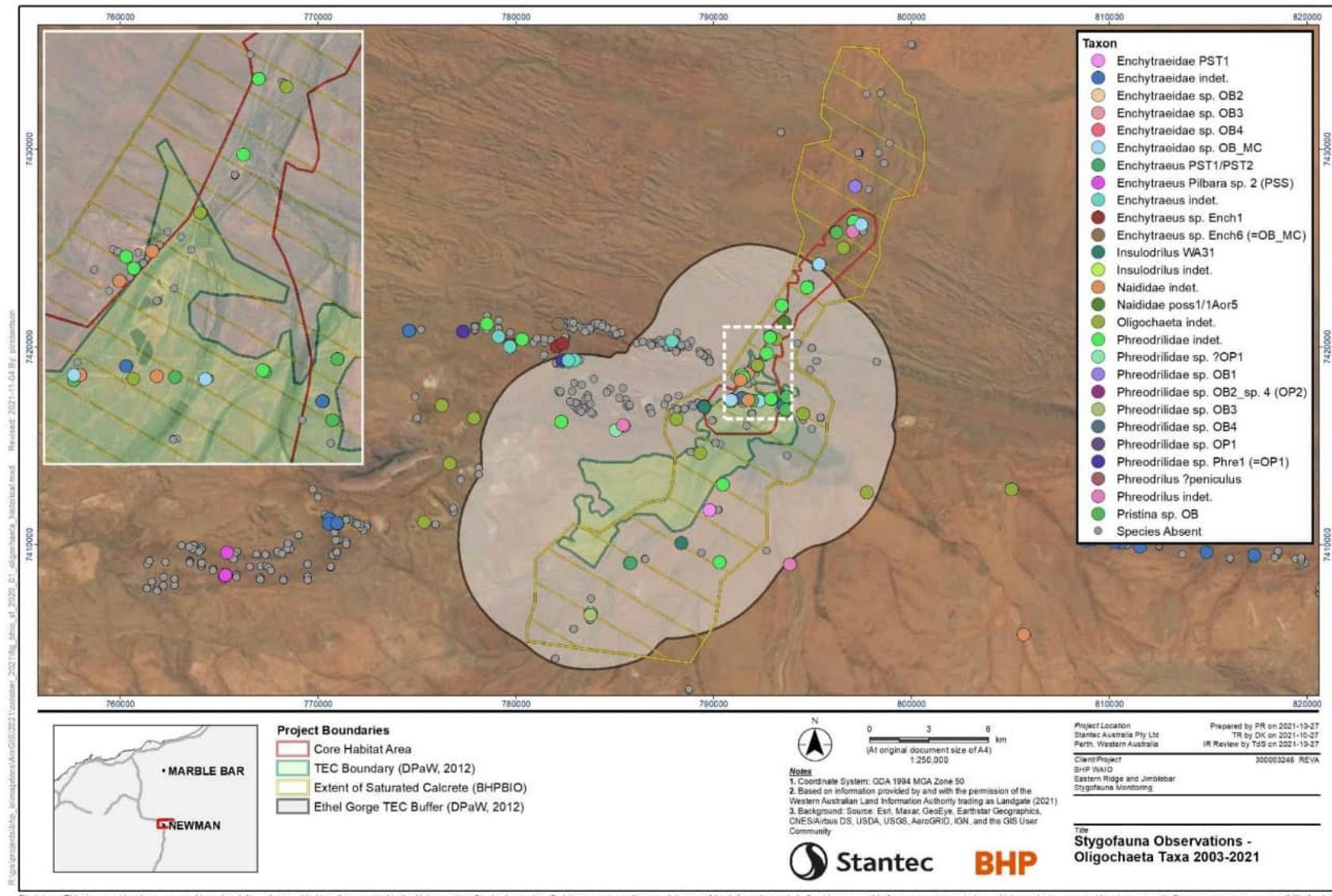


Figure H 8: The distribution of Oligochaeta recorded between 2003 and May 2021.

Appendix I Molecular Identification of Stygofauna (Paramelitidae and Phreodrilidae) from Ophthalmia Dam, Newman, Western Australia, September 2021

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