

# Garden Street Extension

## Groundwater Monitoring

<b>Client</b>	City of Gosnells	<b>Project No</b>	CW1027800
<b>Report Date</b>	30/11/2018	<b>Report Ref:</b>	Letter01.1
<b>Site Location</b>	Garden Street, Southern River		

### 1 Introduction

Cardno was engaged by City of Gosnells to undertake Groundwater Monitoring (“the Assessment”) prior to construction works for the Garden Street Extension in Southern River.

The objective of the assessment was to monitor groundwater to ascertain levels prior to construction as recommended in the Acid Sulfate Soil Report (Douglas Partners, 2018).

### 2 Scope and Methodology

Scope and methodology is provided in Table 1.

**Table 1 Scope, Sampling and Analysis Details**

Details	
<b>Scope of Works</b>	<p>The following scope of works was undertaken as part of the assessment:</p> <ol style="list-style-type: none"> <li>1. Undertake 9 months of groundwater level monitoring</li> <li>2. Prepare an groundwater technical memorandum letter report (this letter).</li> </ol>
	<p>This assessment has been undertaken in general accordance with the current “industry standards” for an assessment of this type for the purpose, objectives and scope identified in this report.</p> <p>The agreed scope of this assessment has been limited for the current purposes of the Client. Conclusions and recommendations presented in this report are derived only from site investigation observations and results. This assessment does not consider potential changes to the condition of the site which may occur or may have occurred since the site inspection and intrusive investigation were undertaken. This assessment report is not any of the following:</p> <ul style="list-style-type: none"> <li>&gt; A Mandatory Audit Report (MAR) or Voluntary Audit Report (VAR) as defined under the CS Act.</li> <li>&gt; A Geotechnical Assessment.</li> <li>&gt; A Detailed Site Investigation (DSI).</li> <li>&gt; A detailed assessment of soil and groundwater contaminants potentially arising from other sites or sources nearby.</li> </ul>
<b>Number of Groundwater Monitoring Events (GMEs)</b>	Monthly Groundwater Monitoring Events (GMEs) were conducted for 9 months in total.
<b>Number of wells monitored</b>	3 monitoring wells
<b>Standing Water Level (SWL) Monitoring</b>	A water level meter was used to measure the depth to groundwater relative to the ground level for calculation of the groundwater flow direction(s).

### 3 Results

Groundwater levels recorded over the monitoring period are presented in table and graph.

**Table 2** Groundwater Levels

Date	Groundwater Level (mAHD)		
	BH04	BH06	BH08
15/12/2017 <sup>1</sup>	20.097	19.865	19.995
15/01/2018	-	-	-
15/02/2018	-	-	-
20/03/2018	19.677	19.48	19.58
24/04/2018	19.517	19.403	19.415
23/05/2018	19.412	19.377	19.345
20/06/2018	19.457	19.45	19.4
10/07/2018	20.184	20.12	20
31/07/2018	20.487	20.36	20.26
20/08/2018	20.757	20.63	20.63
20/09/2018	20.717	20.66	20.53
20/10/2018	20.697	20.64	20.61
20/11/2018	20.337	20.3	20.15

1- Recorded by Douglas Partners

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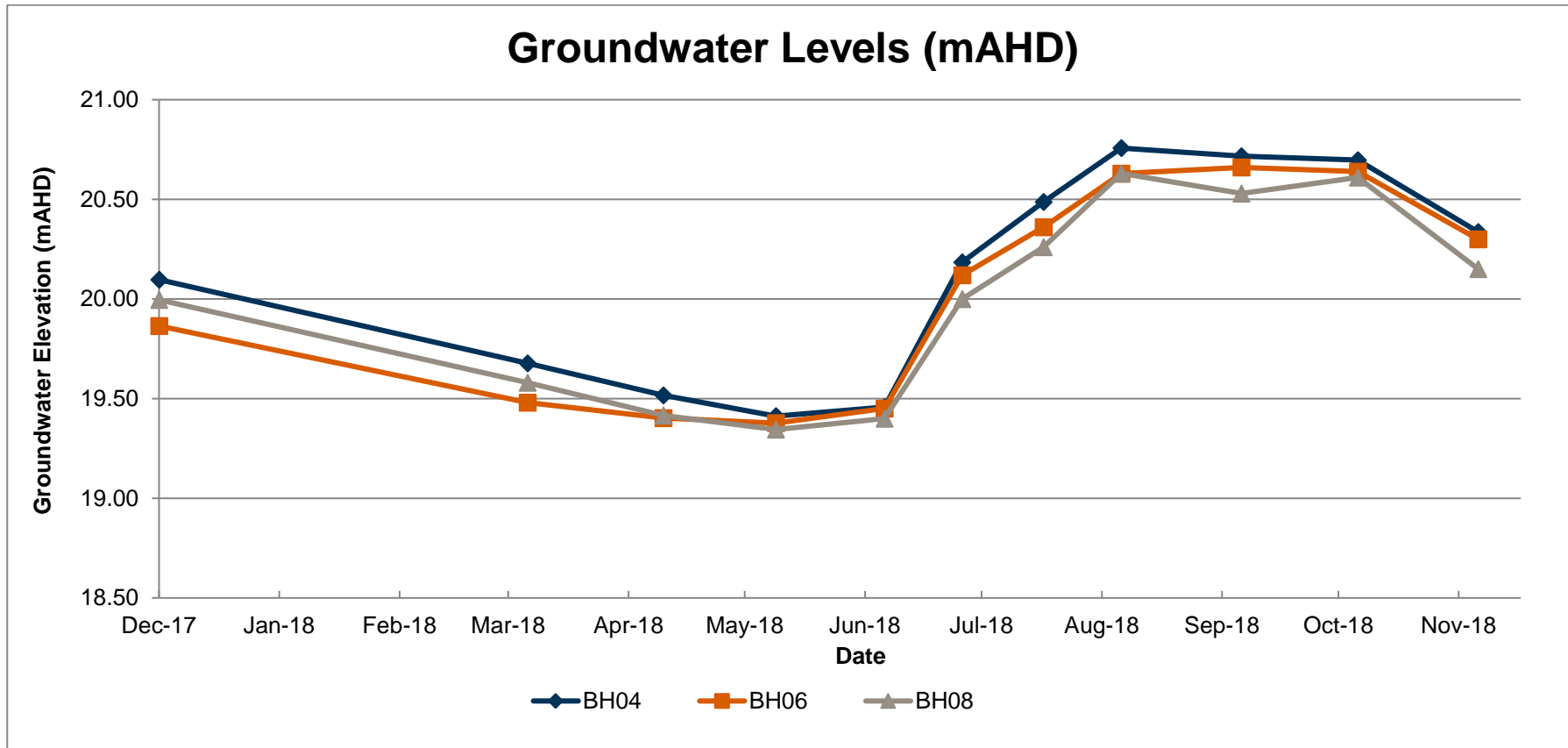


Figure 1: Groundwater levels (mAHD)

## 4 Conclusions

The objective of the assessment was to monitor groundwater to ascertain levels prior to construction.

As noted in the Geotechnical Report (Douglas Partners, 2018) dewatering or any other groundwater disturbance should not be allowed to cause the lowering of the water level in a water body with environmental value (including a conservation category wetland), and should not lower the water level by more than 10cm next to the body.

Groundwater levels recorded during the monitoring period time (presented in Section 3), are sufficient should construction proceed to detailed design for assessment of groundwater interaction.

Should you have any question regarding the above, please contact the undersigned.

Yours faithfully

**Cardno**



**Riccardo Divita**

Section Lead, Water Resources