

**APPENDIX A: Relevant Development Consent Conditions and Water Access Licences**

**Table 1 Development Consent Conditions and Commitments**

Condition Number	Condition Requirement	Report Section												
1.2 ac)	Documents titled <i>Ashton Coal Bowmans Creek Diversion Environmental Assessment</i> dated 3 December 2009, prepared by Evans & Peck, <i>Ashton Coal Bowmans Creek Diversion Response to Submissions</i> , prepared by Wells Environmental Services, dated May 2010, and <i>Ashton Coal Bowmans Creek Diversion Statement of Commitments</i> , dated December 2010 (see Schedule C)	Applies in relation to DC condition 3.9. Table 1 (below)												
3.9 (in part)  Applies in relation to Condition 3.12 (d) & (f) (below)	<p>The Applicant shall ensure that underground mining does not cause any exceedances of the performance measures in Table 1, to the satisfaction of the Director-General.</p> <p><i>Table 1: Subsidence Impact Performance Measures</i></p> <table border="1" data-bbox="347 835 1219 1256"> <thead> <tr> <th colspan="2" data-bbox="347 835 1219 875"><b>Watercourses</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="347 882 703 965">Bowmans Creek</td> <td data-bbox="708 882 1219 965">No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)</td> </tr> <tr> <td data-bbox="347 972 703 1032">Bowmans Creek – Eastern and Western Diversions</td> <td data-bbox="708 972 1219 1032">Hydraulically and geomorphologically stable</td> </tr> <tr> <td data-bbox="347 1039 703 1122">Bowmans Creek alluvium</td> <td data-bbox="708 1039 1219 1122">No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)</td> </tr> <tr> <th colspan="2" data-bbox="347 1128 1219 1169"><b>Biodiversity</b></th> </tr> <tr> <td data-bbox="347 1176 703 1256">Threatened species, threatened populations, or endangered ecological communities</td> <td data-bbox="708 1176 1219 1256">Negligible impact or environmental consequences</td> </tr> </tbody> </table> <p><i>Notes:</i></p> <p>1) <i>The Applicant will be required to define more detailed performance indicators for each of these performance measures in the various management plans that are required under this consent (see condition 3.12 below).</i></p> <p>2) <i>The requirements of this condition only apply to the impacts and consequences of mining operations undertaken following the date of approval of modification 6.</i></p>	<b>Watercourses</b>		Bowmans Creek	No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)	Bowmans Creek – Eastern and Western Diversions	Hydraulically and geomorphologically stable	Bowmans Creek alluvium	No greater subsidence impact or environmental consequences than predicted in the documents referred to in condition 1.2 ac)	<b>Biodiversity</b>		Threatened species, threatened populations, or endangered ecological communities	Negligible impact or environmental consequences	6.2.1 6.2.2 6.2.3
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3.12 (in part)	<p>The Applicant shall prepare and implement an Extraction Plan for the second workings within each seam to be mined to the satisfaction of the Director-General (DG).</p> <p>Each Extraction Plan must:</p> <ul style="list-style-type: none"> <li>d) include detailed performance indicators for each of the performance measures in Tables 1 [above – Condition 3.9] and 2;</li> <li>e) provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences of the proposed second workings, incorporating any relevant information obtained since this consent;</li> <li>f) describe the measures that would be implemented to ensure compliance with the performance measures in Tables 1 [above] and 2, and remediate any impacts and/or environmental consequences;</li> </ul> <p>include a:</p> <ul style="list-style-type: none"> <li>h) Water Management Plan, which has been prepared in consultation with OEH and NoW, which provides for the management of the potential impacts and/or environmental consequences of the proposed second workings on surface water resources, groundwater resources and flooding, and which includes:</li> </ul>	5  6  Addressed in GWMP / draft ACP Water Management Plan												

Condition Number	Condition Requirement	Report Section
	<ul style="list-style-type: none"> <li>- Surface and groundwater impact assessment criteria, including trigger levels for investigating any potential adverse impacts on water resources or water quality;</li> <li>- a program to monitor and report groundwater inflows to underground workings; and</li> <li>- a program to manage and monitor impacts on groundwater bores on privately-owned land;</li> </ul> <p>i) include a program to collect sufficient baseline data for future Extraction Plans.</p>	
3.13	<p>The Applicant shall ensure that the management plans required under the condition 3.12(h) above include:</p> <ul style="list-style-type: none"> <li>a) an assessment of the potential environmental consequences of the Extraction Plan, incorporating any relevant information that has been obtained since this consent;</li> <li>b) a detailed description of the measures that would be implemented to remediate predicted impacts; and</li> <li>c) a contingency plan that expressly provides for adaptive management</li> </ul>	7 & Addressed in GWMP / draft ACP Water Management Plan
Schedule C Item 3	<p>3.1 Mine plans will be reviewed in response to actual subsidence and geotechnical behaviour associated with mining in the deeper seams based on monitoring experience, expert interpretation, and other advice.</p> <p>3.2 The Southern limits of LW5, LW6 and LW7 will be offset at least 200m from the Hunter River alluvium.</p> <p>3.3 Subsidence will be monitored and managed in accordance with approved Extraction Plans (or equivalent), the development of which will be informed by: Subsidence monitoring over LW1-4 in the lower seams, as each seam is mined, to allow more accurate predictions of subsidence parameters above LW5-8. An End of Panel Report for each longwall panel with a focus on subsidence. Consultation with the owner(s)/operator(s) of the Ravensworth Underground Mine on a seam by seam basis.</p> <p>3.4 Subsidence and groundwater experts will be used to assess the western longwall (LW8) to ensure concurrent operation of the RUM and ACOL underground mines can be undertaken safely.</p>	7.3  3  6.2.2 6.3.2
Schedule C Item 4	<p>4.1 The current ACP groundwater monitoring network will be maintained and expanded to enable monitoring of water extracted from the mine workings as the lower seams are developed and mined.</p> <p>4.2 Additional (nested) groundwater monitoring bores will be installed in the alluvium and Pikes Gully overburden at the following locations: Southwest of LW6A.</p> <ul style="list-style-type: none"> <li>- On the eastern side of LW6B near the downstream end of the Eastern Diversion.</li> <li>- On the eastern side of LW6B near the upstream end of the Eastern Diversion.</li> </ul> <p>These monitoring points will be monitored monthly as part of the routine monitoring and weekly at the time that mining occurs in the Pikes Gully seam immediately below in order to monitor groundwater drainage from the alluvium.</p> <p>4.3 The volume of water extracted from the mine workings will be monitored for the life of mine.</p> <p>4.4 The volume and quality of individual sources of groundwater inflows will be monitored where separation of sources is possible.</p>	6 Appendix D & Addressed in GWMP / draft ACP Water Management Plan

Condition Number	Condition Requirement	Report Section
	4.5 The existing ACP Groundwater Trigger Action Response Plan will be reviewed and extended to include monitoring of the lower seam inflows as they are mined.	
Schedule C Item 5	<p>5.1 Water level monitoring will be undertaken in two pools immediately above LW6B as part of the routine monthly monitoring program and used to guide construction of block banks to their final level. While mining is occurring in LW6B, water levels will be monitored weekly.</p> <p>5.2 The existing ACP surface water quality monitoring program will be reviewed and updated where required.</p> <p>5.3 Setting back all secondary workings by at least 40 m (in a horizontal direction) to the high bank of Bowmans Creek in its diverted function form.</p>	Addressed in GWMP / draft ACP Water Management Plan
Schedule C Item 6	<p>6.1 Hold appropriate and adequate water entitlements to account for water from all sources impacted by underground operations on an annual basis.</p> <p>6.2 Returning flows to Bowmans Creek whenever the rules of the Water Sharing Plan for Jerrys Management Zone prohibit the taking of water, including provisions for returning flows post-mine closure. Returned flows will be of an equal or better quality than the receiving waters.</p> <p>6.3 Retaining or retiring an equivalent licensed entitlement to account for the long-term annual water based impacts, post-mine closure.</p> <p>6.4 The provision of an ongoing financial contribution to cover the cost associated with returning flows to Bowmans Creek, post-mine closure, when baseflow impacts to Bowmans Creek are not permitted under the rules of the relevant water sharing plan (from 2015 onwards).</p>	Addressed in ACP Water Management Plan

**Table 2: Water Access Licences**

WAL/Licence No.	Bore/extraction reference	Extraction limits (ML/yr)
<b>Surface Water</b>		
WAL 15583 / 20AL20249	Glennies Creek (General Security)	354
WAL 1358 / 20AL203056	Glennies Creek (Supplementary)	4
WAL 997 / 20AL201311	Glennies Creek (High Security)	11
WAL 8404 / 20AL200941	Glennies Creek (High Security)	80
WAL 1120 / 20AL201624	Hunter River (High Security)	3
WAL 1121 / 20AL201625	Hunter River (General Security)	335
WAL 6346 / 20AL203106	Hunter River (Supplementary)	15.5
20AL210986	Bowmans Creek (Irrigation)	366
20SL042214	Bowmans Creek (Irrigation)	14
<b>Groundwater</b>		
20BL136766	Stock and domestic	-

WAL/Licence No.	Bore/extraction reference	Extraction limits (ML/yr)
20BL169508	Mining 10ML	10
20BL169937	Mining 100ML Objection lodged with NoW regarding modification to new condition statement 09/10	100
20BL171364	Mining 100ML	100