

Friday, 9 December 2016

Bloomfield Collieries

P.O. Box 4

East Maitland NSW 2323

Attention: John Hindmarsh

Response to Comments
Proposed Extension of Mining at the
Rixs Creek Colliery Rev2

1 Background

Mr John Hindmarsh of Rixs Creek Mine (RXC) requested JP Environmental to provide a response to a request for information from Department of Planning & Environment regarding the Environmental Impact Assessment (EIS) report "Surface Water Study for Rixs Creek Continuation of Mining" (SWS). The text of the request is:

"Table 20 of the SWS provides information on the expected changes to catchment surface areas over the life of the project. Please also provide a comparison of the catchment changes between the currently approved final landform and proposed final landform for the project".

2 Methodology

Reference EIS Documents for the Currently Approved Mining Operation

Figure 32 from the original EIS is attached to this letter. We note that it is a scanned copy of a hand drawn document and labelled "Not to Scale – for Diagrammatic Purpose Only". Using this document introduces potential errors when estimating areas due to unavoidable distortions from paper stretch, scanning, file conversions and georeferencing. The topographic contours as plotted on Figure 32 vary slightly but noticeably from the contours available from the Department of Finance, Service and Innovation. Line widths in the georeferenced document measure at 10 – 15 metres width. One would hesitate to rely on setting out boundaries off such a document.

Nevertheless, the georeferenced version of Figure 32 is considered adequate for estimating areas. Figure 32 was used as the base to prepare Mapinfo Tables showing areas of final landform, and the contours on the Figure were used to prepare the plots of the final catchments for Rixs Creek, Station Creek and Deadmans Gully.

Figure 32 does not show areas disturbed by fixed infrastructure (CHPP, industrial areas etc.) so Figures A and B and C comparing the approved final landform and the proposed final landform do not include fixed infrastructure so that like can be compared with like.

3 Results and Impacts

Comparison of the Approved Final Landform and the Proposed Final Landform

The footprint of the approved final landform and the proposed final landform can be visually compared by referencing Figures A and B, attached.

The North Pit and the South Pit final landforms have similar shapes and areas in the Approved and the Proposed scenarios. Overall the Proposed Final Landform for North & South Pit combined exceeds the Approved Final Landform by 17 ha, or 3%.

The Proposed Final Landform for the West Pit Extension, being the main focus of the proposal is significantly larger than the Approved Final Landform.

Table 1: Comparison of Final Landform Areas

Location	Approved Landform Rehabilitation (ha.)	Proposed Landform Rehabilitation (ha.)	Variance (%)
North Pit	379	447	18
South Pit	109	101	-7
West Pit	127	428	337
Voids	122	160	31
TOTAL	737	1136	154

Table 2 shows that the areas of the Proposed Final Landform catchments are, for:

- Rixs Creek catchment 2,475 ha, about 59 ha less than currently approved.
- Station Creek catchment 2,466 ha, about 56 ha more than currently approved.
- Deadmans Creek catchment 1,261 ha, some 35 ha less than currently approved.

The catchment loss from the three impacted catchments increases by 38 ha (0.4%) when the Proposed Final Landform is compared to the currently Approved Final Landform – Refer Table 2.

Table 2: Comparison of Final Catchment Areas

Scenario	Rixs Creek (ha)	Station Creek (ha)	Unnamed Creek (ha)	Mine Voids (ha) ¹	Total (ha)	Catchment Loss
Undisturbed (1990)	2,562	2,413	1,387 ²	0	6,362	0%
Approved Final Landform	2,534	2,410	1,296	122	6,362	1.9%
Proposed Final Landform	2,475	2,466	1,261	160	6,362	2.5% ³

¹ Previously this column was headed "Mining Areas" in table 20 of the SWS, and included some fixed infrastructure e.g. CHPP closed catchments & the former underground, totalling about 93 ha..

² Catchment size corrected from 1,402 ha in the SWS.

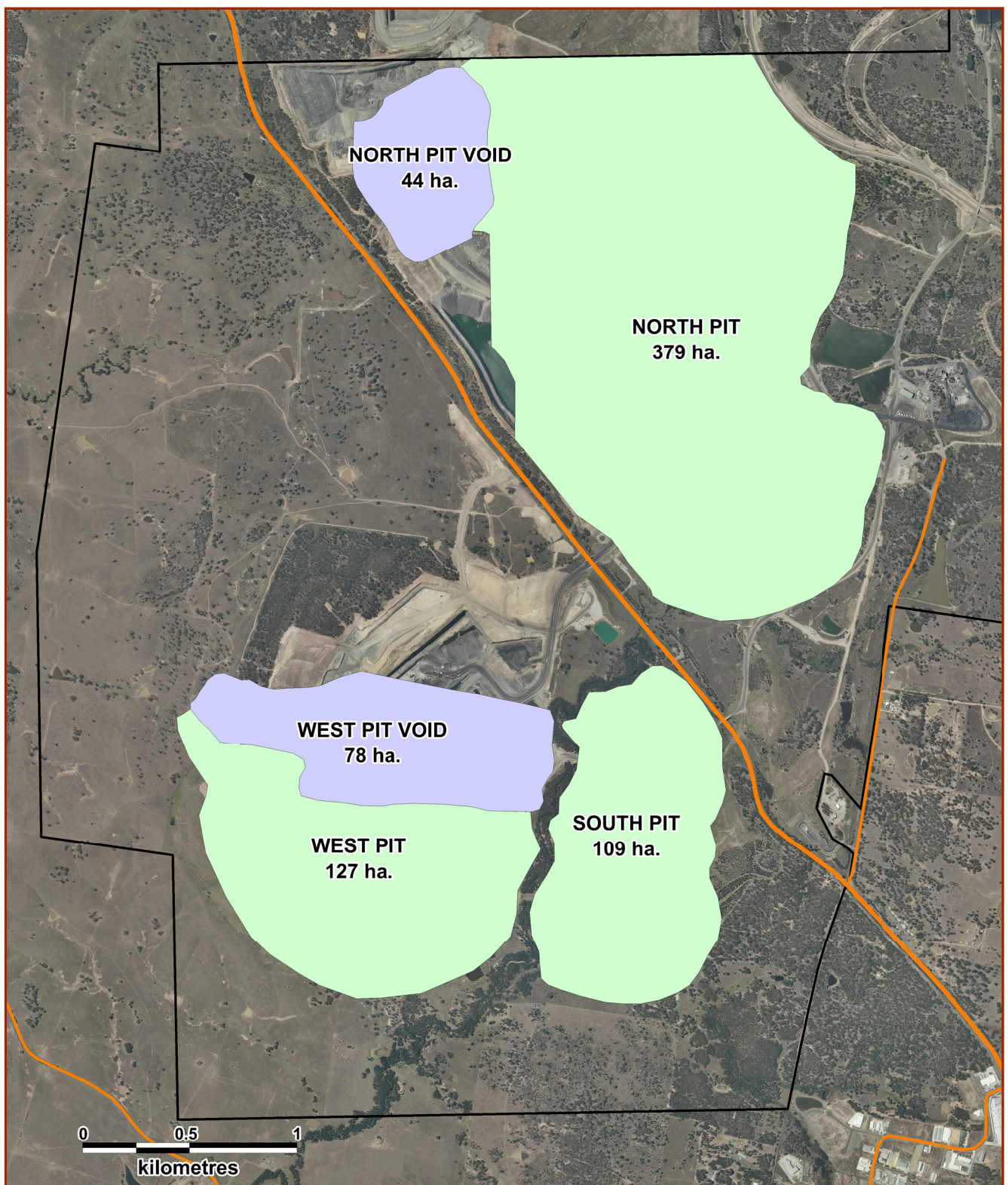
³ Varies from Table 20 in the SWS, in which ongoing mining was assumed. Here, some fixed infrastructure e.g. CHPP closed catchments & the former underground (which becomes a clean water dam that drains to the Rixs Creek final catchment), are not counted in the Voids column.

Should you need further assistance with this matter, please do not hesitate to contact me.

Yours Sincerely,

A handwritten signature in purple ink, appearing to read "John Pola". The signature is fluid and cursive, with the first name "John" and last name "Pola" clearly distinguishable.

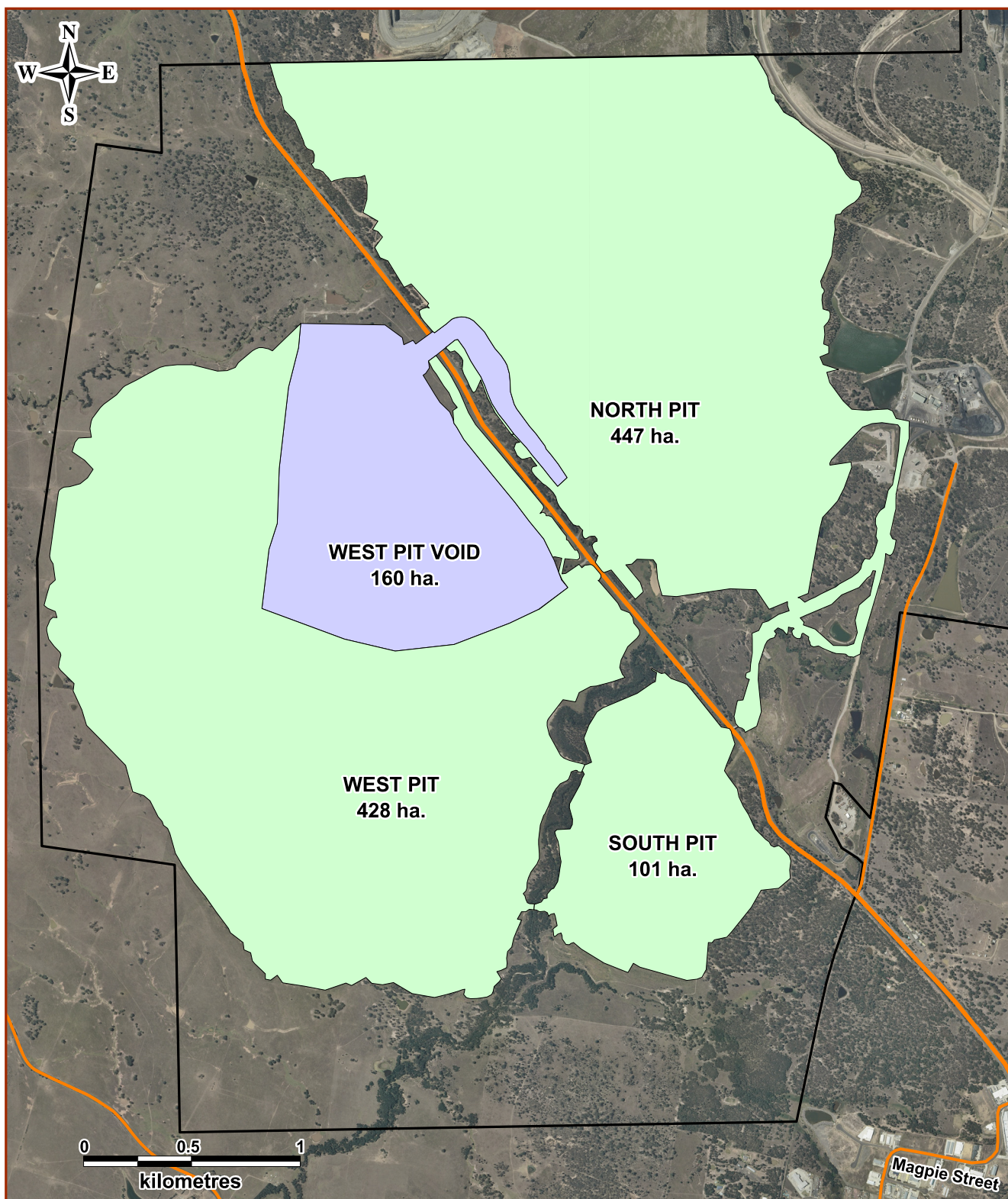
John Pola
Managing Director



JP Environmental

Surface Water Study for Rixs Creek
Continuation of Mining

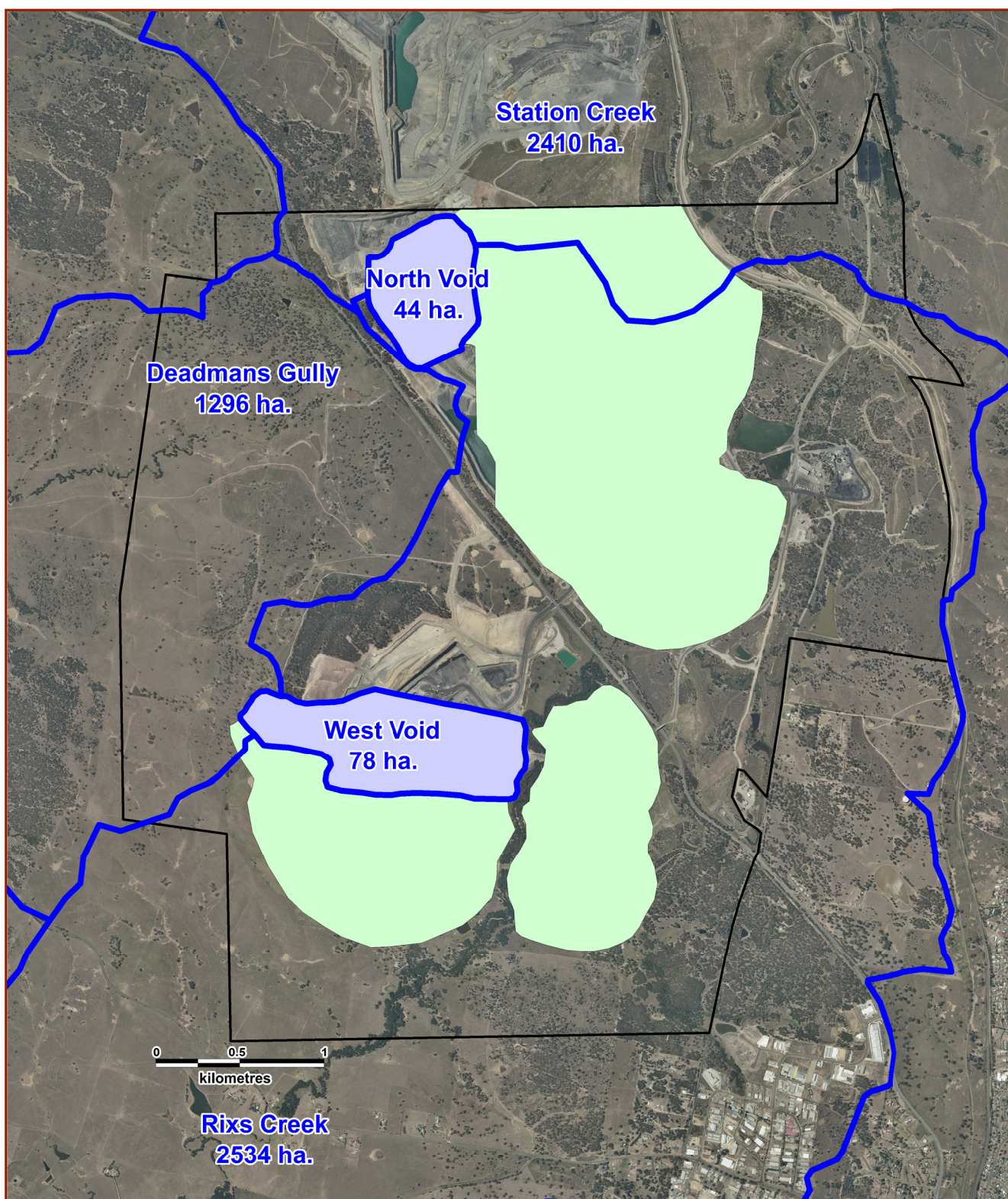
Figure A : Original Approval : Final Landform Areas (Fixed Infrastructure Excluded)




JP Environmental

Surface Water Study for Rixs Creek
Continuation of Mining



Figure B (rev2): Proposal : Final Landform Areas (Fixed Infrastructure Excluded)



Final Catchments for Original Consent

 Catchment Boundary

Final Land Use

 Rehabilitation
 Void

Other

 Project Boundary

JP Environmental

**Surface Water Study for Rixs Creek
Continuation of Mining**

Figure C (rev1) : Original Approval : Catchments for Final Landform