

CONSERVATION AGREEMENT

BETWEEN

THE MINISTER ADMINISTERING
THE NATIONAL PARKS AND WILDLIFE ACT 1974 (NSW)

AND

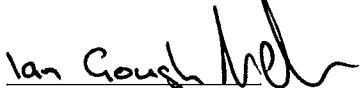
Ulan Coal Mines Limited

FOR

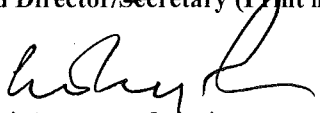
Bobadeen Vegetation Offset Area



Ulan Coal Mines Limited Director (Print name and sign)



Ulan Coal Mines Limited Director/Secretary (Print name and sign)

ANTHONY LEAN 

Chief Executive OEHL (Print name and sign)

ROBERT KERRINS 

ARDROB PTY LIMITED as leaseholders of Lot 1 DP 701346 consent to this agreement (Print name and sign)

<<This page to be signed by all parties to the Agreement>>

CONSERVATION AGREEMENT UNDER PART 4 DIVISION 12 OF THE NATIONAL PARKS AND WILDLIFE ACT 1974

THIS AGREEMENT is between the **Minister** administering the *National Parks and Wildlife Act 1974* (**Minister**) and **Ulan Coal Mines Limited** the owner of part Lots 1, 3 and 4 in Deposited Plan 701346, part Lot 15 and 45 in Deposited Plan 750735, part Lots 2, 54, 61 and lot 73 in Deposited Plan 750736.

BACKGROUND

- A The Owner is the registered proprietor of the Land. That part of the Land shown by hatching on Diagram A of Annexure A to the Conservation Agreement is the conservation area (Conservation Area). The Conservation Area is approximately 1369.8 hectares in size.
- B The Conservation Agreement satisfies commitments made to secure biodiversity offsets relating to the Ulan Coal Project PA 08_0184 (NSW) and EPBC 2009/5252.
- C It is the intention of the parties that the Conservation Area will not be used as a biodiversity offset or other conservation measure related to any future development or activity, consistent with current NSW Government policy.
- D The Conservation Area is to be managed to restore and protect the Conservation Values.
- E The Owner and the Minister recognise:
- i) The Conservation Area contains eight plant community types:
- Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South (BBS) Bioregion (PCT 281)
 - Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland (southern BBS Bioregion) (PCT 403)
 - Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern BBS Bioregion (PCT 478)
 - Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern BBS Bioregion and Sydney Basin Bioregion (PCT 479)
 - Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern BBS Bioregion and Upper Hunter region (PCT 481)
 - White Box - Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, BBS Bioregion (PCT 1310)
 - Scribbly Gum - Narrow-leaved Ironbark - Bossiaea rhombifolia heathy open forest on sandstone ranges of the Sydney Basin (PCT 1675)
 - Broom Bush - Allocasuarina gymnanthera heathy woodland on sandstone outcrops of the Sydney Basin (PCT 1709)
- ii) The Conservation Area contains habitat for 30 vulnerable and 3 endangered species listed under the TSC Act, of these, 11 are also listed as either vulnerable, marine, migratory, endangered or critically endangered under the EPBC Act. The Conservation Areas provides a range of habitat types from woodland to grassland and contains specific habitat features, such as hollow-bearing trees. A total of 17 threatened fauna species have been previously recorded within the Conservation Area (refer to Table 3, Annexure B).

- iii) The following Endangered Ecological Communities are present in the Conservation Area (Annexure B, Table 2):
- *White Box Yellow Box Blakely's Red Gum Woodland* is listed as an Endangered Ecological Community (EEC) under the *NSW Threatened Species Conservation Act 1995* (TSC Act) and as a Critically Endangered Ecological Community (CEEC) under the *Environmental Protection and Biodiversity Conservation Act 1999* (EPBC Act).
- iv) There is good connectivity between the Conservation Area and adjacent woodland areas and Conservation Areas (Spring Gully Cliffline Management Area), particularly from the north and south of the site. The Conservation Area also has connectivity values with other areas: The Durridgere State Conservation Area is located approximately 3.9 km to the north and the Goulburn River National Park is 3.6km to the southeast with bushland corridors available to both.
- v) The Conservation Area adjoins Bobadeen Grinding Groove Conservation Agreement, therefore it is likely that the Conservation Area contains cultural heritage values.

DEFINITIONS AND INTERPRETATION

1.1 Definitions

In the Conservation Agreement, unless the contrary intention appears:

"**Aboriginal Object**" has the same meaning as in section 5 of the NPW Act;

"**Aboriginal Place**" has the same meaning as in section 5 of the NPW Act;

"**BC Act**" means the *Biodiversity Conservation Act 2016* and the regulations in force thereunder;

"**Chief-Executive**" means the Chief-Executive of OEH or a person or organisation to whom the Chief Executive's rights and duties under this Conservation Agreement have been delegated;

"**Commencement date**" means the date on which the Minister signs the Conservation Agreement;

"**Conservation Agreement**" means this Conservation Agreement entered into under section 69B of the NPW Act;

"**Conservation Area**" means that part of the Land shown by hatching on Diagram A of Annexure A to the Conservation Agreement;

"**Conservation Values**" means the biodiversity values of the Conservation Area specified in Annexure B to the Conservation Agreement;

"**control**", in relation to the Land, means lawful occupation, possession or management of the Conservation Area;

"**controlled burning**" means the controlled application of fire under specified environmental and weather conditions to a predetermined area and at the time, intensity and rate of spread required to attain planned resource management objectives;

"**critical habitat**" has the same meaning as in section 4 of the TSC Act;

"**cultural heritage**" refers to the aesthetic, historic, scientific, social, spiritual or other values of a place and associated physical evidence and traditions held by past, present or future generations of peoples, including Aboriginal peoples;

"**damage**" has the same meaning as in section 5 of the NPW Act;

"**development**" has the same meaning as in section 69A of the NPW Act;

"**EPBC Act**" refers to the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth);

"**exotic plant**" means an introduced, alien, exotic, non-indigenous, non-native or a plant species living outside its native distributional range;

"**fauna**" has the same meaning as in section 5 of the NPW Act;

"**geo-heritage**" means any karst environment and any geological deposits and landforms that provide habitat for indigenous fauna and includes values identified as geo-heritage under the heading Conservation Values in Annexure B to the Conservation Agreement;

"**harm**" has the same meaning as in section 5 of the NPW Act;

"**indigenous fauna**" means a species of animal that was established in, or started regularly migrating to New South Wales prior to European settlement and includes fauna listed in Annexure B to the Conservation Agreement;

"**indigenous plants**" means a species of plant that was established in New South Wales prior to European settlement and includes plants listed in Annexure B to the Conservation Agreement;

"**Land**" means the land in folio identifier of part Lots 1, 3 and 4 in Deposited Plan 701346, part Lot 15 and 45 in Deposited Plan 750735, part Lots 2, 54, 61 and lot 73 in Deposited Plan 750736.

"**Minister**" means the Minister for the time being administering the NPW Act and where not repugnant to the context includes the servants, agents and delegates of the Minister;

"**NPW Act**" means the *National Parks and Wildlife Act 1974* (NSW) and any regulations from time to time in force thereunder;

"**native fauna**" has the same meaning as "protected fauna" in section 5 of the NPW Act;

"**native plant**" has the same meaning as in section 5 of the NPW Act;

"**native vegetation**" has the same meaning as in the *Native Vegetation Act 2003* (NSW);

"**OEH**" means the Office of Environment and Heritage, the NSW Government Public Service agency responsible for administering the NPW Act or a person or organisation to whom OEH's rights and duties under this Conservation Agreement have been delegated;

"**Owner**" means the registered proprietor of the Land from time to time, being Ulan Coal Mines Limited as at the date of the Conservation Agreement, and includes any successors in title within the meaning of section 69E of the NPW Act;

"**pest animal**" means any non-native animal having, or with the potential to have, an adverse economic, environmental or social impact on the Conservation Area;

"**pesticide**" has the same meaning as in section 5 of the *Pesticides Act 1999* (NSW);

"**reasonable**" in relation to carrying out an activity, means making a legitimate effort and carrying out the activity in such a way as to have a minimal negative impact on the Conservation Values of the Conservation Area;

"**recovery plan**" means a recovery plan as defined in section 4 of the TSC Act, or a biodiversity conservation program established in accordance with Part 4 Division 6 of the BC Act;

"**road**" allows the passage of vehicles and persons and may be of more developed construction and surface improvement;

"**threatened species, populations and ecological communities**" and "**threatened species, population or ecological community**" have the same meaning as in the TSC Act;

"**TSC Act**" means the *Threatened Species Conservation Act 1995* (NSW);

"**track**" allows non-vehicular access only;

"**trail**" allows the passage of vehicles and persons and is of minimal construction, being of limited width and minimal surface improvement; and

"**Year 1**" means twelve month period following the Commencement date.

1.2 Interpretation

In the Conservation Agreement, except where the context otherwise requires:

- (a) words importing the singular number shall include the plural and masculine gender the feminine or neuter and vice versa; and
- (b) any reference to a person shall be deemed to include a corporate body and vice versa.

2 CONSERVATION AGREEMENT UNDER THE NPW ACT

- 2.1 The Minister enters into the Conservation Agreement relating to the Land with the Owner under section 69B of the NPW Act and clause 17(2) of the *Biodiversity Conservation (Savings and Transitional) Regulation 2017*.
- 2.2 The Owner acknowledges that the Minister, the Chief Executive or OEH may delegate some or all of their roles or duties under the Conservation Agreement to another person or organisation, including the Biodiversity Conservation Trust established under the BC Act. The Minister, the Chief Executive or OEH may give the Owner notice in writing of any change to their address for service of notices, and the Owner must use the address set out in any such notice.

3 TERM

The Conservation Agreement shall operate in perpetuity.

4 OBTAINING OF CONSENTS, PERMITS AND AUTHORISATIONS

The Owner is responsible for obtaining all necessary licenses, consents, authorisations, permits or approvals in order to lawfully comply with and carry out its obligations under the Conservation Agreement or to undertake or enable any other identified action or development under clauses 5 or 6.

5 USE OF THE CONSERVATION AREA

The Owner must not undertake, consent to or permit the following activities on or in the Conservation Area, unless provided for under the Conservation Agreement or with prior written consent of the Chief-Executive:

- (a) the sowing or planting of trees, grasses or other plants;
- (b) the introduction of any non-indigenous plants or non-indigenous fauna;
- (c) the entry of domestic animals including pets (except for the Owner's domestic pets, and only if kept under control/on a leash) and domestic livestock;
- (d) the use or application of fertilizers or pesticides;
- (e) the use of trail bikes, four wheel drive vehicles or any other vehicle off any formed road (except for management purposes, research, firefighting and/or any emergency requirements);
- (f) any works, especially any revegetation work, or any development which has the potential to adversely impact on any of the Conservation Values;
- (g) the removal of any biological or inorganic component of the Conservation Area;
- (h) any works which will adversely affect the natural flows of water;
- (i) grazing of domestic livestock;
- (j) any act or omission that may harm any native fauna, native plants, their habitats, cultural heritage or geo-heritage in the Conservation Area or the Conservation Values;
- (k) the construction of any new road, access track, trail, building or internal fencing; and
- (l) subdivide the Conservation Area.

6 MANAGEMENT OF THE CONSERVATION AREA

- 6.1 The Owner must undertake the management actions and achieve aims listed in Item 1 and Item 2 of Annexure C to the Conservation Agreement on or in the Conservation Area, at the times specified in Item 1 of Annexure C to the Conservation Agreement, for a minimum period of 10 years from the Commencement date.
- 6.2 The Owner must undertake the management actions listed in Item 2 of Annexure C to the Conservation Agreement on or in the Conservation Area, from Year 11 for the duration of the Conservation Agreement.
- 6.3 The Owner must undertake the management actions specified above (in clauses 6.1 and 6.2) according to the permissions and guidelines specified in Item 3 of Annexure C.
- 6.4 The Owner may undertake additional management actions (not specified in clauses 6.1 and 6.2 above) listed in Item 3 of Annexure C to the Conservation Agreement on or in the Conservation Area, if carried out in the manner prescribed in Item 3 of Annexure C to the Conservation Agreement.

7 MONITORING

- 7.1 The Owner must engage a suitably qualified person (such as an ecologist) to undertake the monitoring program as set out in Annexure D to the Conservation Agreement (Monitoring Program).
- 7.2 The Monitoring Program must be undertaken for a minimum 10 year period after commencement of the Conservation Agreement.
- 7.3 The Monitoring Program may be reviewed and varied after the commencement date of the Conservation Agreement with written approval from OEH.

8 REPORTING OBLIGATIONS

- 8.1 Following completion of the Monitoring Program the Owner should (at least every three years) submit to OEH basic photo point photos for the purpose of identifying changes occurring in the Conservation Area. At the time of submitting the photos, the Owner must also report any unforeseen deterioration of any of the Conservation Values specified in Annexure B, or any threat to the Conservation Values specified in Annexure B. This will form the basis for decisions about ongoing management actions for the Conservation Area.

9 USE OF THE CONSERVATION AREA BY SERVANTS, AGENTS, LESSEES OR LICENSEES

The Owner must incorporate the terms of the Conservation Agreement in any lease or licence issued over the Conservation Area, and at all times ensure that any servant, contractor, consultant, agent, lessee, licensee occupying the Conservation Area shall be aware of the relevant provisions of the Conservation Agreement.

10 CHANGE OF OWNERSHIP

- 10.1 The Owner must notify the Chief-Executive in writing of any change of ownership or control of the Land within twenty-eight (28) days after the change of ownership or control. The notice must include the name and address of the new Owner of the Land or person in control of the Land.
- 10.2 If the Land is sold or ownership transferred within the first 10 years of this Agreement, the management actions listed in Item 1 of Annexure C and the Monitoring Program detailed in Annexure D must be carried out by the new owner for the remaining period.

11 RIGHT TO INSPECT

The Minister may, at any time upon first giving reasonable notice to the Owner, enter upon the Conservation Area to inspect the condition of the Conservation Area and ensure compliance with the Conservation Agreement.

12 OBLIGATIONS OF THE MINISTER

- 12.1 The Minister agrees to notify the Registrar General when the Conservation Agreement has been entered into so that the Registrar General can carry out his or her responsibilities under section 69G of the NPW Act.
- 12.2 The Minister will arrange for the provision of technical advice and any other assistance to the Owner as the Minister deems necessary to assist with the implementation of the Conservation Agreement.

13 NON-COMPLIANCE

In the event that the Owner fails to comply with the Conservation Agreement, including, without limitation, damaging or causing damage to the Conservation Area, OEHL may issue a written notice to the Owner requiring the Owner to remedy the non-compliance or damage within a specified time period. This clause does not affect any rights of the parties under section 69G of the NPW Act.

14 DISPUTE RESOLUTION

- 14.1 Where there is a dispute, difference or claim (dispute), the party raising the dispute must notify the other party in writing of the nature of the dispute, including the factual and legal basis of the dispute (written notice).
- 14.2 Within fourteen (14) days of the written notice, the Chief-Executive of OEHL and the Owner, or nominated senior representatives of the parties, must attempt to resolve the dispute. If the dispute cannot be resolved within twenty-one (21) days of the written notice, the Chief-Executive of OEHL and the Owner will refer the matter to mediation.
- 14.3 The parties will agree on the terms of appointment of the mediator and the terms of the mediation in writing within twenty-eight (28) days, failing which the mediation will be at an end and either party may commence court proceedings in respect of the dispute.
- 14.4 If the matter has not been resolved within twenty-eight (28) days of the appointment of the mediator, the mediation process will be at an end and either party may commence court proceedings in respect of the dispute.

15 COSTS

The Owner will bear costs of, and incidental to, the preparation of the Conservation Agreement, including survey and legal costs.

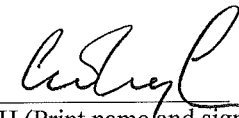
16 COMMENCEMENT

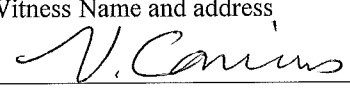
The Conservation Agreement shall have effect from the day the Minister executes the Conservation Agreement.

Executed as an agreement

SIGNED by

The Chief Executive, Office of Environment and Heritage, as the Minister's delegate under Section 21(1) of the National Parks and Wildlife Act 1974

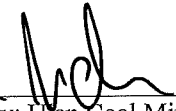
ANTHONY LEAH 
Chief Executive OEH (Print name and sign)


VICKI COMINS
Witness signature
59 Goulburn Street
Sydney NSW 2000
Witness Name and address

Date 7.5.19

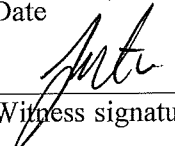
Date 7.5.19

SIGNED by the OWNER Executed by Ulan Coal Mines Limited pursuant to Section 127 of the Corporations Act 2001 (Commonwealth).

Charles Allan Allan
Director: Ulan Coal Mines Limited
(Print name and sign)
21-12-2018
Date

Ian Gould 
Director/Secretary: Ulan Coal Mines Limited
(Print name and sign)
3/1/2019
Date


Witness signature
ROBYN STONEY
Witness Name and Address


Witness signature
Jason Martin
Witness Name and Address

31 SHORT ST MUDGEES NSW
21.12.2018
Date

8 Newman St Muswellbrook NSW 2533
3/1/19
Date

Address for service of notices on the Owner:

General Manager
Ulan Coal Mines Limited
Private Mail Bag 3006
Mudgee NSW 2850

Address for service of notices on the Chief Executive OEH

The Chief Executive
NSW Office of Environment and Heritage
PO Box A290 Sydney South NSW 1232

Address for service of notices on the Minister:

NSW Minister for the Environment
GPO Box 5341 Sydney NSW 2001

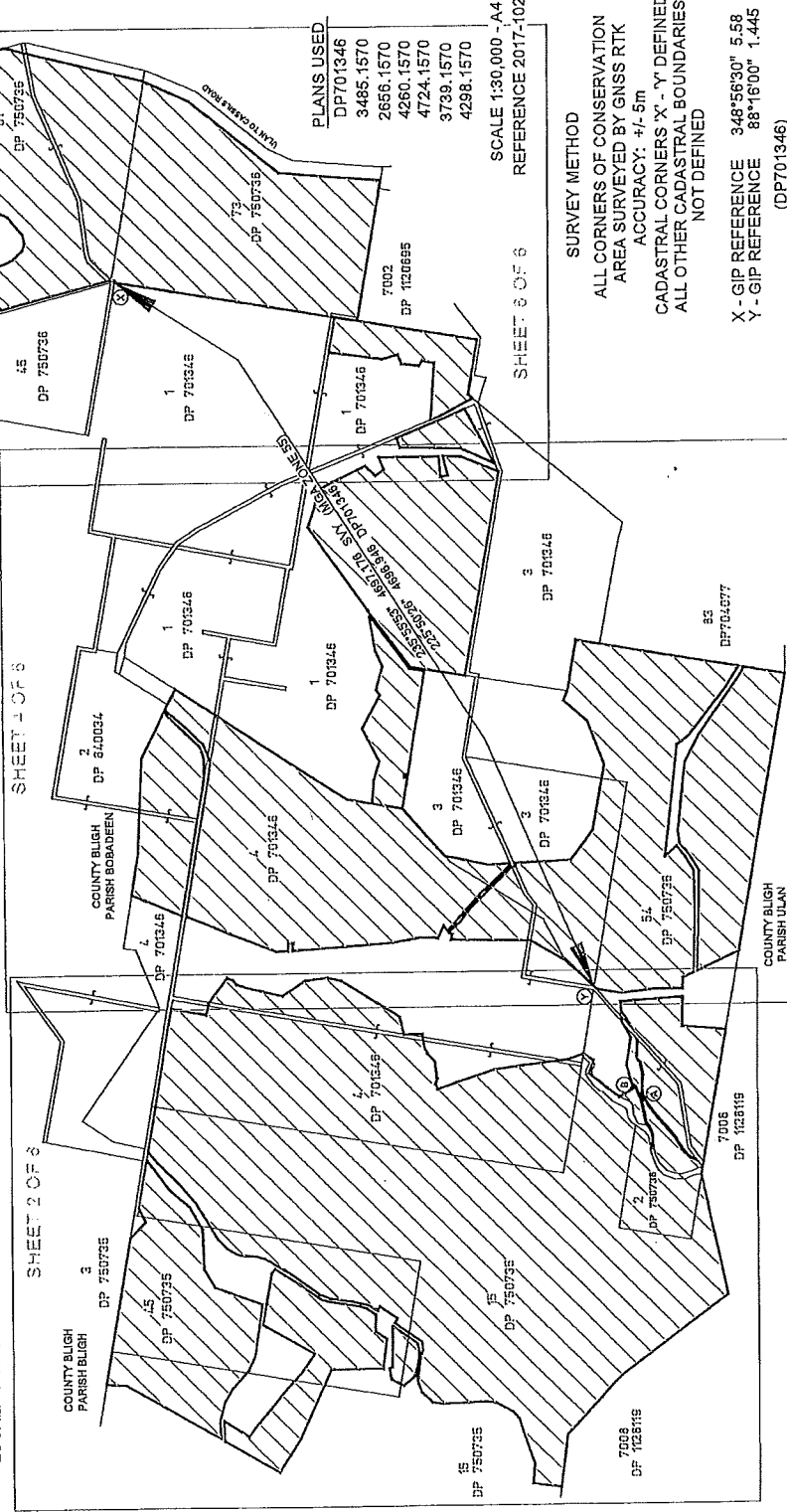
ANNEXURE A – DIAGRAM A: CADASTRAL BOUNDARIES OF CONSERVATION AREA

PLAN OF ANNEXURE
BOBADEEN CONSERVATION AREA
SHEET 1 OF 6

WITHIN LOT 254/6173 DP750735
LOT 15/45 DP750735, LOT1,3,4 DP 701346
PARISH OF BLIGH COUNTY OF BLIGH
LOCALITY OF BOBADEEN
PARISH OF BOBADEEN COUNTY OF BLIGH
LOCALITY OF BOBADEEN

PREPARED BY PHILLIP ORR OF ORYAN
GEOSPATIAL PTY. LTD. (ABN 62 000 2850)
Signature Date 29/6/18
Surveyor registered under the Surveying and Spatial Information Act 2002

CONSERVATION AREA SHOWN
BY HATCHING - ABT 1369.8HA

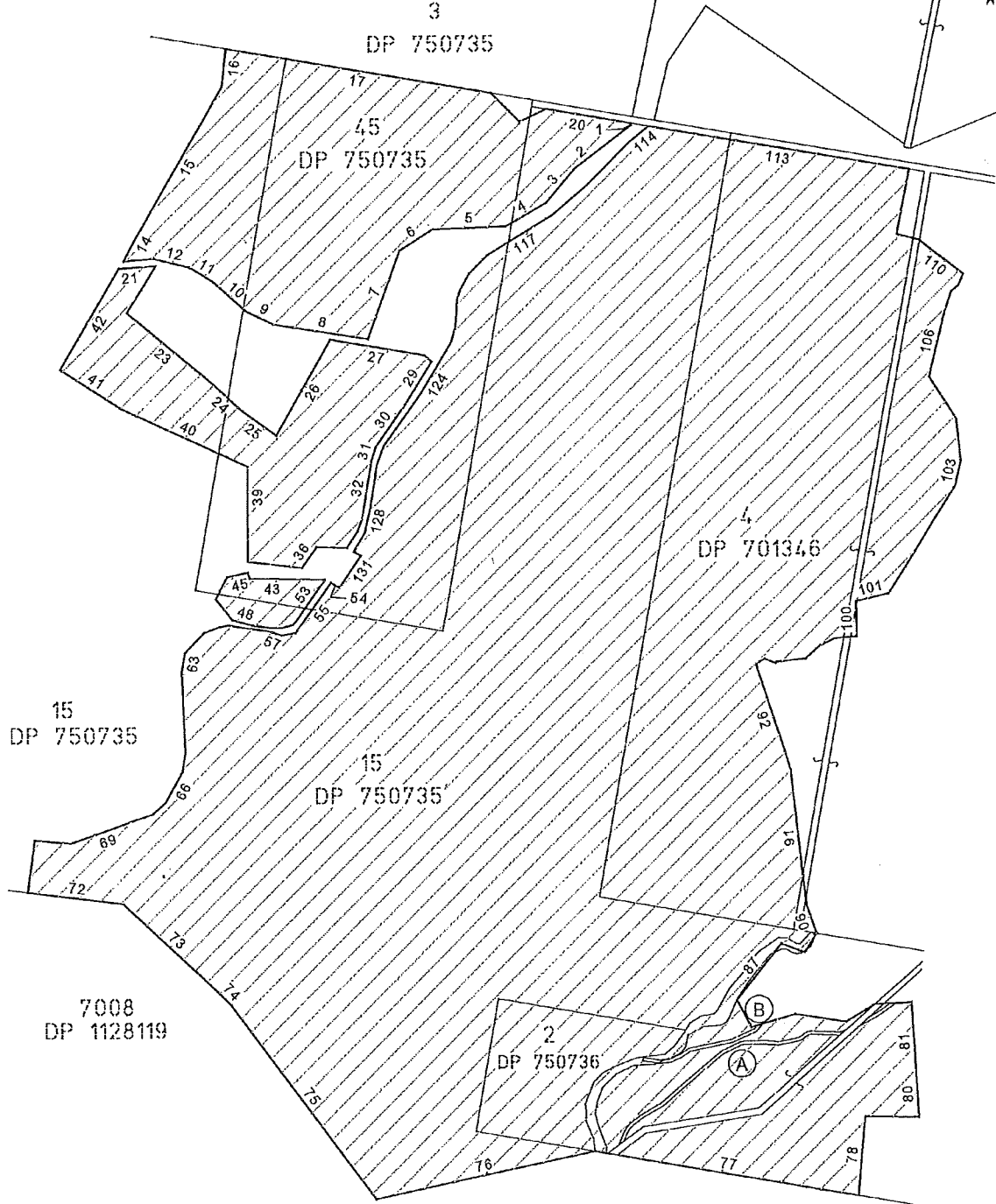


Anthony Lean
ANTHONY LEAN
Chief Executive OEH

Alan
Alan
Ulan Coal Mines Limited Director/Secretary

Alan
Alan
Ulan Coal Mines Limited Director

PLAN OF ANNEXURE
BOBADEEN CONSERVATION AREA
DETAILED SHEET 2 OF 6
SCALE 1:15000



(B) OFFSET BOUNDARY IS 10 METER FROM CENTERLINE OF EXCISTING PIPE
 (A) OFFSET BOUNDARY IS 10 METER FROM CENTERLINE OF EXCISTING TRACK
 NUMBERING OF OFFSET BOUNDARIES CORRESPOND TO SHORT LINE TABLE ON SHEET 3 OF 6

PLAN OF ANNEXURE
BOBADEEN CONSERVATION AREA
DETAILED SHEET 3 OF 6
SHORT LINE TABLE SHEET 2



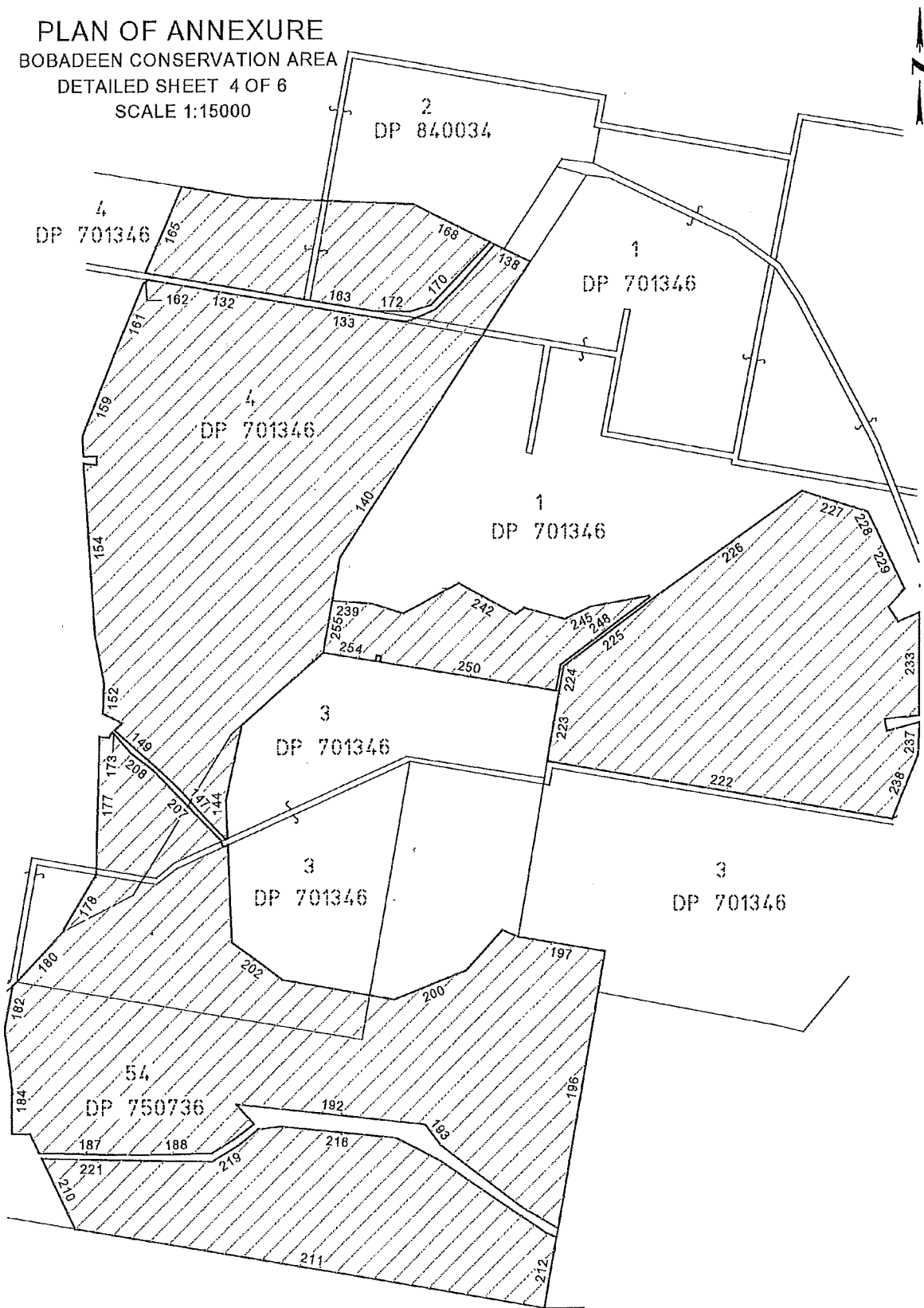
No.	BEARING	DIST.
1	183°20'45"	6.870
2	232°42'40"	209.675
3	220°08'00"	136.105
4	240°03'55"	139.170
5	268°04'40"	222.485
6	237°47'10"	117.690
7	199°38'25"	280.710
8	279°00'25"	286.330
9	295°29'15"	90.410
10	311°32'10"	134.750
11	301°35'25"	83.065
12	284°11'20"	110.075
13	265°49'10"	90.975
14	27°54'10"	72.260
15	29°36'00"	525.875
16	5°27'00"	113.145
17 *	99°40'55"	810.085
18 *	134°39'10"	122.960
19 *	65°11'50"	88.950
20 *	99°40'55"	257.920
21	86°09'30"	112.855
22	211°39'00"	164.610
23	129°47'10"	332.455
24	132°28'55"	119.980
25	125°33'55"	129.430
26	29°21'15"	327.985
27	99°38'30"	287.730
28	132°45'50"	29.005
29	211°56'05"	148.345
30	214°46'45"	156.340
31	196°16'40"	43.630
32	189°15'25"	174.275
33	199°26'30"	40.220
34	212°33'45"	58.280
35	271°25'10"	91.755
36	214°52'30"	76.040
37	276°51'30"	165.175
38	359°57'35"	101.060
39	359°50'20"	183.610
40	294°43'30"	422.040
41	303°06'00"	212.460
42	29°44'35"	347.865
43	90°53'25"	225.975
44	161°52'05"	19.440
45	77°20'40"	63.905

No.	BEARING	DIST.
46	26°41'15"	73.635
47	321°28'10"	79.920
48	285°32'40"	62.700
49	278°05'45"	57.245
50	269°10'30"	31.565
51	255°27'55"	33.190
52	222°49'05"	18.970
53	214°26'10"	148.520
54	119°31'20"	30.335
55	34°58'10"	183.580
56	81°32'50"	43.175
57	108°10'30"	38.295
58	98°09'50"	80.425
59	99°03'20"	43.430
60	81°01'55"	27.705
61	69°02'55"	51.040
62	43°34'10"	81.365
63	10°25'45"	56.350
64	357°15'50"	242.920
65	8°51'00"	57.220
66	28°06'15"	104.305
67	48°14'55"	54.175
68	71°54'00"	50.055
69	70°29'45"	209.840
70	95°32'25"	108.575
71	7°45'40"	157.080
72 *	277°06'40"	288.330
73 *	312°59'50"	386.780
74 *	315°07'45"	58.285
75 *	323°07'15"	726.705
76 *	258°01'10"	675.205
77	279°49'10"	802.450
78	184°46'40"	237.325
79	271°04'20"	161.235
80	176°29'05"	110.310
81	176°08'50"	232.920
82	87°13'05"	110.105
83	59°14'30"	99.680
84	98°46'00"	154.320
85	73°48'50"	136.690
86	152°23'25"	91.020
87	217°43'00"	212.850
88	289°32'10"	77.015
89	211°34'40"	66.380
90	160°40'30"	91.635

No.	BEARING	DIST.
91	173°11'40"	405.490
92	161°54'40"	333.530
93	240°56'55"	29.695
94	291°46'25"	33.450
95	220°45'50"	4.505
96	263°34'05"	89.535
97	228°12'15"	58.580
98	245°47'30"	48.645
99	263°50'40"	65.625
100	178°13'05"	103.915
101	256°26'05"	101.095
102	211°47'00"	380.045
103	192°56'25"	74.820
104	173°36'20"	125.280
105	147°09'15"	151.545
106	193°03'35"	202.340
107	198°27'30"	61.855
108	231°26'15"	28.385
109	202°24'50"	36.890
110	127°21'30"	170.615
111	103°46'45"	67.190
112	190°28'05"	197.720
113 *	99°40'55"	792.215
114	50°22'40"	78.460
115	44°21'50"	167.675
116	49°12'25"	146.125
117	58°46'55"	229.945
118	44°51'25"	77.115
119	29°28'20"	55.725
120	18°59'55"	28.670
121	3°32'45"	81.740
122	15°11'10"	46.450
123	29°52'45"	94.055
124	31°00'00"	83.340
125	35°23'20"	193.410
126	20°11'50"	60.690
127	8°25'40"	123.290
128	12°38'20"	83.985
129	29°32'10"	65.445
130	298°47'35"	23.870
131	33°39'45"	115.425

* DENOTES OFFSET BOUNDARY COINCIDENT WITH CADASTRAL BOUNDARY

PLAN OF ANNEXURE
BOBADEEN CONSERVATION AREA
DETAILED SHEET 4 OF 6
SCALE 1:15000



NUMBERING OF OFFSET BOUNDARIES CORRESPOND TO SHORT LINE TABLE ON SHEET 5 OF 6

PLAN OF ANNEXURE
BOBADEEN CONSERVATION AREA
DETAILED SHEET 5 OF 6
SHORT LINE TABLE SHEET 4



SHORT LINE TABLE SHEET 4		
No.	BEARING	DIST.
132 *	99°45'35"	502.680
133 *	99°32'35"	285.280
134	96°32'20"	61.595
135	66°50'35"	100.330
136	44°49'30"	108.680
137	41°23'15"	175.435
138 *	116°10'00"	127.165
139	213°06'05"	746.885
140 *	212°33'35"	386.230
141 *	190°02'40"	310.850
142 *	228°28'30"	350.155
143	191°42'20"	248.945
144	177°35'00"	120.875
145	245°41'50"	6.455
146	315°55'30"	83.865
147	317°50'45"	144.425
148	312°41'05"	97.345
149	311°51'10"	179.695
150	49°16'45"	34.665
151	295°58'55"	70.970
152	2°08'20"	96.125
153	349°51'35"	162.860
154	356°10'20"	551.935
155	96°43'00"	41.340
156	1°24'20"	27.700
157	270°14'55"	42.670
158	357°54'10"	65.635
159	20°55'55"	216.175
160	21°00'45"	49.045
161	22°21'00"	261.950
162	53°02'25"	19.270
163 *	279°40'55"	223.635
164 *	279°40'55"	520.315
165	22°52'25"	301.625
166 *	99°27'00"	218.450
167 *	92°36'45"	533.395
168 *	116°10'00"	280.055
169	223°28'05"	158.250
170	223°24'30"	119.425
171	253°17'15"	73.985
172	271°39'55"	121.825
173	228°34'55"	4.510

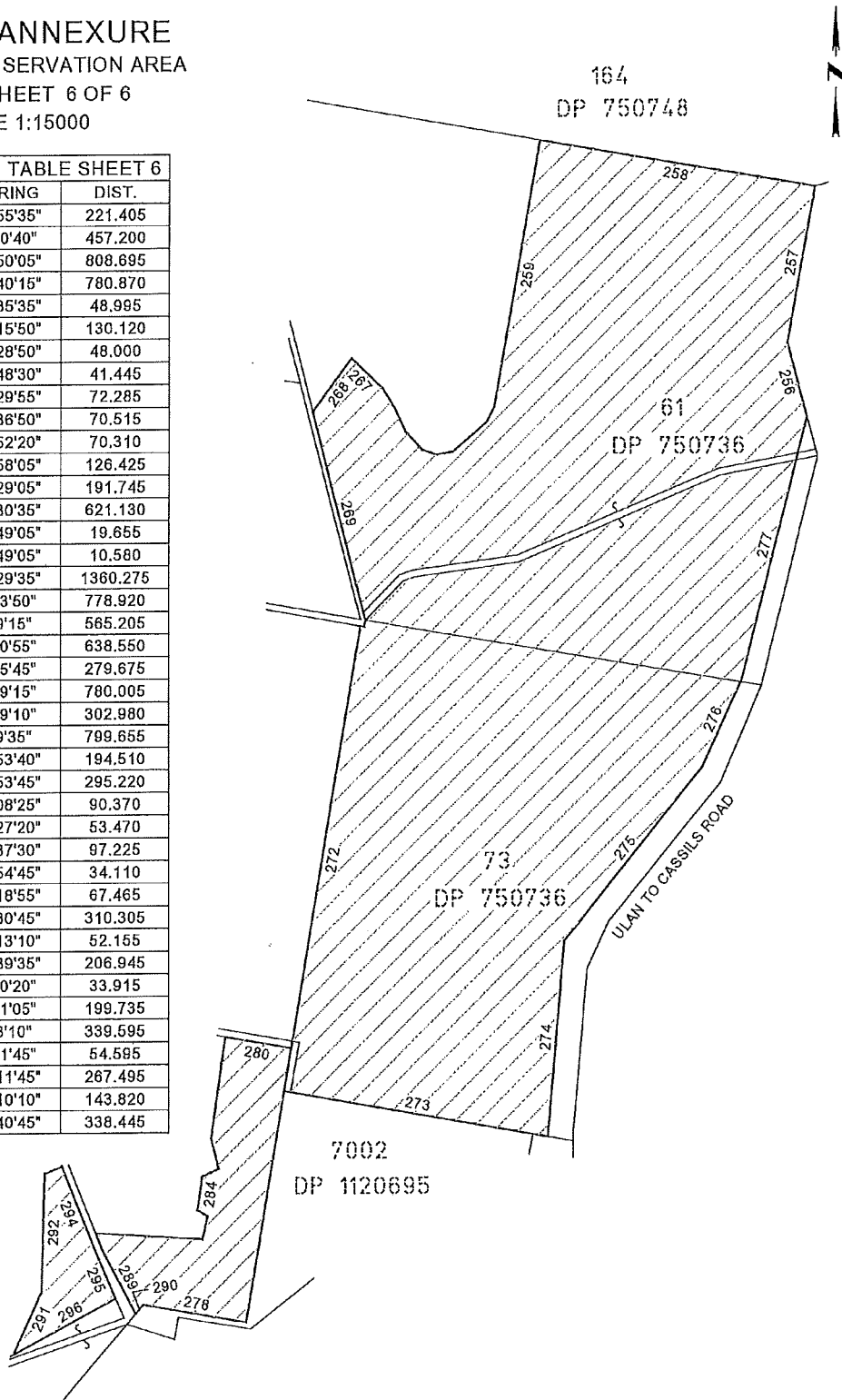
SHORT LINE TABLE SHEET 4		
No.	BEARING	DIST.
174	207°27'35"	16.840
175	272°43'10"	16.675
176	281°46'55"	13.820
177	181°21'55"	444.775
178	210°41'00"	205.870
179	149°55'05"	4.535
180	223°05'20"	223.730
181	228°09'35"	18.035
182	190°13'35"	141.935
183	173°04'35"	196.685
184	180°42'50"	141.660
185	91°04'20"	58.730
186	154°43'35"	66.975
187	91°29'10"	322.655
188	88°46'45"	237.625
189	58°47'50"	84.400
190	52°27'40"	78.300
191	318°38'45"	85.595
192	96°24'15"	615.920
193	142°17'20"	84.435
194	127°14'30"	336.340
195	120°53'50"	127.920
196 *	9°47'00"	904.890
197 *	279°36'30"	283.515
198	292°47'20"	56.325
199	222°07'10"	175.050
200	248°39'35"	253.340
201	280°17'05"	365.660
202	306°35'40"	204.060
203	357°36'55"	314.175
204	245°41'50"	13.660
205	315°53'55"	7.655
206	337°56'35"	17.935
207	315°59'00"	313.820
208	308°03'25"	92.085
209	318°37'15"	89.735
210	230°56'35"	82.650
211 *	99°49'10"	1541.790

SHORT LINE TABLE SHEET 4		
No.	BEARING	DIST.
212 *	9°47'00"	230.885
213	292°58'55"	35.030
214	304°23'30"	413.195
215	297°03'35"	164.340
216	275°57'35"	378.340
217	263°01'30"	70.755
218	230°56'35"	82.650
219	238°56'10"	98.020
220	271°06'00"	232.155
221	271°25'30"	319.290
222 *	279°45'35"	1132.390
223 *	9°32'20"	228.745
224	9°42'30"	80.765
225	53°06'30"	359.285
226	54°22'15"	594.595
227	108°06'00"	221.630
228	152°02'25"	60.410
229	154°13'30"	216.485
230	222°43'20"	78.095
231	148°28'05"	58.775
232	66°44'35"	73.745
233	179°55'40"	333.040
234	264°46'45"	111.915
235	169°40'25"	39.795
236	75°16'20"	109.690
237	182°17'20"	104.120
238	202°17'10"	222.935
239	94°43'25"	127.090
240	107°17'20"	107.685
241	62°06'15"	205.885
242	118°28'50"	210.500
243	52°29'40"	34.140
244	105°37'05"	135.155
245	64°57'00"	92.165
246	79°51'35"	192.375
247	137°21'30"	5.085
248	233°06'30"	362.260
249	189°42'30"	84.785
250 *	279°28'05"	578.980
251	10°36'40"	18.585
252	279°39'25"	15.095
253	190°36'25"	18.635
254	279°28'05"	171.965
255	10°02'40"	170.710

* DENOTES OFFSET BOUNDARY COINCIDENT WITH CADASTRAL BOUNDARY

PLAN OF ANNEXURE
BOBADEEN CONSERVATION AREA
DETAILED SHEET 6 OF 6
SCALE 1:15000

SHORT LINE TABLE SHEET 6		
No.	BEARING	DIST.
256	344°55'35"	221.405
257	10°00'40"	457.200
258	279°50'05"	808.695
259	189°40'15"	780.870
260	207°35'35"	48.995
261	229°15'50"	130.120
262	260°28'50"	48.000
263	289°48'30"	41.445
264	316°29'55"	72.285
265	335°36'50"	70.515
266	328°52'20"	70.310
267	313°58'05"	126.425
268	216°29'05"	191.745
269	165°30'35"	621.130
270	189°49'05"	19.655
271	279°49'05"	10.580
272 *	189°29'35"	1360.275
273 *	99°53'50"	778.920
274	4°49'15"	565.205
275	38°40'55"	638.550
276	24°05'45"	279.675
277	13°59'15"	780.005
278	99°49'10"	302.980
279 *	9°29'35"	799.655
280	279°53'40"	194.510
281	187°53'45"	295.220
282	166°08'25"	90.370
283	245°27'20"	53.470
284	187°37'30"	97.225
285	121°54'45"	34.110
286	192°18'55"	67.465
287	273°30'45"	310.305
288	158°13'10"	52.155
289	152°39'35"	206.945
290	41°20'20"	33.915
291	24°31'05"	199.735
292	1°33'10"	339.595
293	68°11'45"	54.585
294	158°11'45"	267.495
295	157°10'10"	143.820
296 *	241°40'45"	338.445



* DENOTES OFFSET BOUNDARY COINCIDENT WITH CADASTRAL BOUNDARY
NUMBERING OF OFFSET BOUNDARIES CORRESPOND TO SHORT LINE TABLE ON SHEET 6 OF 6

ANNEXURE B - CONSERVATION VALUES

1. CONSERVATION VALUES

The Owner and the Minister recognise that the Conservation Area contains the following conservation values:

A The Conservation Area contains eight plant community types:

- PCT 281: Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South (BBS) Bioregion
- PCT 403: Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland (southern BBS Bioregion)
- PCT 478: Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern BBS Bioregion
- PCT 479: Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern BBS Bioregion and Sydney Basin Bioregion
- PCT 481: Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern BBS Bioregion and Upper Hunter region
- PCT 1310: White Box - Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, BBS Bioregion
- PCT 1675: Scribbly Gum - Narrow-leaved Ironbark - Bossiaea rhombifolia heathy open forest on sandstone ranges of the Sydney Basin
- PCT 1709: Broom Bush - Allocasuarina gymnanthera heathy woodland on sandstone outcrops of the Sydney Basin

Rough-Barked Apple - Red Gum - Yellow Box Woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion (PCT 281)

Tall open forest or woodland with trees up to 30 m high dominated by Rough-barked Apple (*Angophora floribunda*) usually with *Eucalyptus blakelyi* or *Eucalyptus melliodora*. Other tree species may include *Callitris glaucophylla*, *Brachychiton populneus* and various red gum intergrades. River Oak (*Casuarina cunninghamiana* subsp. *cunninghamiana*) may be present but often forms its own riparian community in nearby river banks.

The shrub layer is sparse or absent in heavily grazed locations. Shrub species may include wattles such as *Acacia implexa*, *Acacia decora*, *Acacia penninervis* var. *penninervis* and *Acacia deanei*. Other shrub species may include *Dodonaea viscosa* subsp. *angustifolia*, *Bursaria spinosa*, *Olearia elliptica* subsp. *elliptica* and *Hibbertia obtusifolia*.

The ground cover is usually dense to mid-dense. It includes grass species such as *Austrostipa verticillata*, *Austrostipa scabra*, *Arundinella nepalensis*, *Digitaria breviglumis*, *Echinopogon* spp., *Dichelachne micrantha*, *Poa labillardierei* var. *labillardierei* and *Themeda australis*. The mat-rush *Lomandra longifolia* may be common. Rush (*Juncus* spp.) occur along creeks and in depressions along with sedges such as *Carex inomitata*. Forb species include *Swainsona galegifolia*, *Haloragis heterophylla*, *Dianella revoluta* var. *revoluta*, *Ranunculus sessiliflorus* var. *sessiliflorus*, *Dichondra repens*, *Epaltes australis*, *Haloragis heterophylla*, *Epaltes australis*, *Calotis cuneifolia*, *Ajuga australis*, *Dichondra repens*, *Scutellaria humilis* and *Hydrocotyle laxiflora*. Scramblers include *Desmodium brachypodum*, *Desmodium repens* and *Glycine clandestina*.

A widespread community that occurs on black, brown and grey alluvial and colluvial clay loam, loam or sandy loam soils derived from a range of substrates on valley flats and footslopes in valleys in hill landform patterns mainly in the BBS Bioregion. Some areas also occur north of Mudgee in the Gulgong-

Dunedoo area in the NSW South-western Slopes Bioregion. Most of its original extent has been cleared and weeds have invaded many remnants but some stands remain.

The intact and DNG areas of this PCT are consistent with the *White Box Yellow Box Blakely's Red Gum Woodland* under the TSC and EPBC Acts. The presence of this community in the Conservation Area was determined by comparing the 'assemblage of species' present, the 'particular area' in which they occur, and other physical descriptors against the Final Determination (NSW) with regard to the following attributes:

- It occurs in the Mid Western Local Government Area (LGA) and BBS Bioregion where the EEC has previously been recorded.
- It is a woodland/Forest with a canopy dominated by *Eucalyptus albens*, a mid-storey featuring *Acacia implexa* and a ground layer dominated by *Bothriochloa macra*, which are characteristic species of the EEC.
- It supports a proportion of species that are in the list of characteristic species for the EEC: 15 out of 47 (32%) native species recorded in this community are in the EEC listing and 15 out of 95 (16%) species in the characteristic species list for the EEC were recorded in this community.

Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland (southern Brigalow Belt South Bioregion) (PCT 403)

Mid-high to tall open forest or woodland containing Mugga Ironbark (*Eucalyptus sideroxylon*) often with Red Stringybark (*Eucalyptus macrorhyncha*), and usually Western Grey Box (*Eucalyptus microcarpa*) on hills, Black Cypress Pine (*Callitris endlicheri*), Red Ironbark and occasionally Inland Scribbly Gum (*Eucalyptus rossii*). The shrub layer is very sparse to sparse and includes species such as *Sannantha cunninghamii*, *Cassinia arcuata*, *Acacia buxifolia* subsp. *buxifolia*, *Lissanthe strigosa* subsp. *strigosa*, *Acacia linearifolia*, *Acacia acinacea*, rarely *Melaleuca thymifolia* and *Brachyloma daphnoides* subsp. *daphnoides*.

The ground cover often contains much leaf litter or bare ground with a very sparse to sparse ground cover of grasses, mat-rushes and forbs. The low shrubs *Astroloma humifusum* and *Phyllanthus hirtellus* may be abundant. Grass species include *Entolasia stricta*, *Aristida vagans*, *Microlaena stipoides* var. *stipoides*, *Echinopogon caespitosus* var. *caespitosus*, *Joycea pallida*, *Austrodanthonia racemosa* var. *racemosa*, *Aristida jerichoensis* var. *jerichoensis* and *Dichelachne micrantha*. The mat-rush *Lomandra filiformis* subsp. *coriacea* and the sedges *Gahnia aspera* and *Lepidosperma laterale* are often common. Forb species include *Stypandra glauca*, *Gonocarpus elatus*, *Calotis cuneifolia*, *Laxmannia gracilis*, *Podolepis jaceoides* and *Veronica arenaria*.

Occurs on brown sandy loam or gravelly sandy loam soils derived from sandstone on hillscrests and hillslopes in low hills and hills landscape patterns in the southern-most part of the Brigalow Belt South Bioregion mainly east of Mendooran including in Dapper Nature Reserve. Restricted in extent and mostly cleared and heavily grazed. Different in composition than the Mugga Ironbark type in the Goonoo forests (ID470) or in the Pilliga Scrub (ID402) or Mugga Ironbark types to the south in the NSW SWS Bioregion.

The intact and DNG areas of this PCT are consistent with the EEC *White Box Yellow Box Blakely's Red Gum Woodland* under the TSC and EPBC Acts. The presence of this community in the Conservation Area was determined by comparing the 'assemblage of species' present, the 'particular area' in which they occur, and other physical descriptors against the Final Determination (NSW) with regard to the following attributes:

- It occurs in the Mid Western Local Government Area (LGA) and BBS Bioregion where the EEC has previously been recorded.

- It is a woodland/Forest with a canopy dominated by *Eucalyptus microcarpa*, a mid-storey featuring *Acacia paradoxa* and a ground layer dominated by *Aristida ramosa*, *Bothriochloa macra* and *Elymus scaber*, which are characteristic species of the EEC.
- It supports a proportion of species that are in the list of characteristic species for the EEC: 21 out of 48 (44%) native species recorded in this community are in the EEC listing and 21 out of 95 (22%) species in the characteristic species list for the EEC were recorded in this community.

Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern Brigalow Belt South Bioregion (PCT 478)

Mid-high to tall open forest co-dominated by Red Ironbark (*Eucalyptus fibrosa*), Black Cypress Pine (*Callitris endlicheri*), Red Stringybark (*Eucalyptus macrorhyncha*) and/or Narrow-leaved Stringybark (*Eucalyptus sparsifolia*) and the small tree *Acacia linearifolia*. Other trees may include Scribbly Gum (*Eucalyptus rossii*), Grey Gum (*Eucalyptus punctata*) and Slaty Gum (*Eucalyptus dawsonii*). The last two species are past or near their western limit. The shrub layer is sparse and includes *Phyllanthus hirtellus*, *Brachyloma daphnoides* subsp. *daphnoides*, *Hibbertia obtusifolia*, *Melichrus urceolatus*, *Cassinia laevis*, *Persoonia linearis*, *Pultenaea microphylla*, *Dillwynia sieberi*, *Hibbertia circumdans*, *Olearia microphylla*, *Acacia uncinata*, *Indigofera australis*, *Lissanthe strigosa* subsp. *strigosa*, *Bursaria spinosa* subsp. *spinosa* and *Ozothamnus diosmifolius*.

The ground cover is mid-dense to sparse. The small shrubs *Platysace ericoides* and *Astroloma humifusa* are often present. Grasses include *Joycea pallida* and *Austrodanthonia racemosa*. The mat-rushes include *Lomandra filiformis*, *Lomandra confertifolia* and *Lomandra multiflora* along with the sedge *Lepidosperma laterale*. Forb species include *Pomax umbellata*, *Chrysocephalum semipapposum*, *Goodenia hederacea* subsp. *hederacea*, *Veronica plebeia*, and *Stypantra glauca*.

Occurs on sandy loam to clayey sand soils derived from sandstone, siltstone, shale or slate on footslopes, hillcrests and hillslopes in hill and low hill landform patterns in the Dunedoo - Merriwa region of the extreme south BBS Bioregion overlapping into the NSW South West Slopes Bioregion and upper Hunter Valley and Capertee Valley. Grades into a similar community dominated by Inland Scribbly Gum - Red Stringybark open forest (ID477), into the Dapper Mugga Ironbark community (ID403) and a Narrow-leaved Ironbark - Black Cypress Pine shrubby community (ID479) on sandstones. Partly cleared.

Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion (PCT 479)

Tall open forest dominated by Narrow-leaved Ironbark (*Eucalyptus crebra*), Black Cypress Pine (*Callitris endlicheri*) often with *Eucalyptus sparsifolia*, *Eucalyptus punctata* or *Eucalyptus dwyeri*. Other tree species may include *Eucalyptus nubila*, *Acacia linearifolia*, *Acacia crassa*, *Eucalyptus macrorhyncha*, *Eucalyptus fibrosa* and *Corymbia trachyphloia* subsp. *amphistomatica*. The occasional presence of *Eucalyptus punctata* and *Eucalyptus sparsifolia* indicates this community is transitioning into typical Sydney Basin sandstone vegetation. The shrub layer is usually sparse but may be mid-dense in places and is rich in species. Shrub species include *Cassinia arcuata*, *Acacia buxifolia* subsp. *buxifolia*, *Acacia verniciflua*, *Acacia piligera*, *Cassinia laevis*, *Dodonaea triangularis*, *Phyllanthus hirtellus*, *Sannantha cunninghamii*, *Macrozamia spiralis*, *Melichrus urceolatus*, *Allocasuarina gymnanthera*, *Melichrus erubescens*, *Grevillea sericea*, *Styphelia triflora*, *Acacia sertiformis*, *Leucopogon muticus*, *Hibbertia obtusifolia*, *Kunzea parvifolia*, *Acrotriche rigida*, *Prostanthera howelliae*, *Exocarpos cupressiformis* and *Choretrum sp. A*.

The ground cover is usually sparse and may contain litter or rock. Grass species include *Joycea pallida*, *Austrostipa densiflora*, *Echinopogon caespitosus* var. *caespitosus*, *Digitaria ramularis*, *Aristida vagans* and *Microlaena stipoides* var. *stipoides*. The low shrub *Astroloma humifusum* may be present. Sedges such as *Gahnia aspera* and *Lepidosperma laterale* and mat-rushes such as *Lomandra glauca* and *Lomandra filiformis* subsp. *coriacea* may be present. Forb species include *Pomax umbellata*, *Goodenia hederacea* subsp. *hederacea*, *Gonocarpus elatus*, *Dianella revoluta* var. *revoluta*, *Stypantra glauca* and *Xerochrysum viscosum*.

Occurs on red-brown loamy clay to sandy loam soils derived from sandstone, siltstone and shale in hill and low hill landforms in the southern BBS, northern NSW SWS and north-western Sydney Basin Bioregions. Some areas have been cleared but reasonable representation in reserves.

Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region (PCT 481)

Tall open forest to woodland dominated by *Angophora floribunda*, *Eucalyptus blakelyi* with *Eucalyptus punctata* grading upslope into *Eucalyptus crebra*, *Eucalyptus sparsifolia*, *Acacia linearifolia* and *Callitris endlicheri*. Shrubs are sparse and include *Styphelia triflora*, *Hibbertia obtusifolia*, *Persoonia linearis* and *Xanthorrhoea johnsonii*.

The ground cover is very sparse and bare in creek beds. Grasses include *Microlaena stipoides* var. *stipoides*, *Echinopogon caespitosus*, *Echinopogon ovatus*, *Imperata cylindrica* var. *major*, *Arundinella nepalensis* and *Lachnagrostis filiformis*. Forbs include *Dichondra repens*, *Persicaria prostrata*, *Hydrocotyle laxiflora*, *Geranium solanderi* var. *solanderi*, *Poranthera microphylla*, *Rorippa laciniata*, *Rumex brownii*, *Urtica incisa*, *Sigesbeckia australiensis*, *Veronica plebeia* and *Geranium potentilloides* var. *potentilloides*. The rock fern *Cheilanthes sieberi* subsp. *sieberi* and the tall ferns *Pteridium esculentum* and *Pteris tremula* also occur. The sedge *Carex appressa* and rush *Juncus psammophilus* may be present.

Occurs on alluvial sands or loam soil derived mainly from sandstone in hill or low hill landforms in the upper Hunter Valley mainly in the Sydney Basin Bioregion with small areas in the BBS Bioregion. Partly cleared and sometimes weed infested due to position in valleys.

The intact and DNG areas of this PCT are consistent with the *White Box Yellow Box Blakely's Red Gum Woodland* under the TSC and EPBC Acts. The presence of this community in the Conservation Area was determined by comparing the 'assemblage of species' present, the 'particular area' in which they occur, and other physical descriptors against the Final Determination (NSW) with regard to the following attributes:

- It occurs in the Mid Western Local Government Area (LGA) and BBS Bioregion where the EEC has previously been recorded.
- It is a woodland/Forest with a canopy dominated by *Eucalyptus blakelyi* and *Eucalyptus melliodora*, a mid-storey featuring *Acacia implexa* and *Callitris endlicheri* and a ground layer featuring *Aristida ramosa*, *Austrostipa scabra* and *Bothriochloa macra*, which are characteristic species of the EEC.

It supports a proportion of species that are in the list of characteristic species for the EEC: 20 out of 56 (36%) native species recorded in this community are in the EEC listing and 20 out of 95 (21%) species in the characteristic species list for the EEC were recorded in this community.

White Box - Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, Brigalow Belt South Bioregion (PCT 1310)

Mid-high to tall open forest or woodland containing White Box (*Eucalyptus albens*) Yellow Box (*Eucalyptus melliodora*), Grey Box (*Eucalyptus moluccana*), Tumbledown Red Gum (*Eucalyptus dealbata*) and Kurrajong (*Brachychiton populneus* subsp. *populneus*). The shrub layer is very sparse to sparse and includes species such as *Bursaria spinosa* subsp. *spinosa* (Native Blackthorn), *Indigofera australis* (Australian Indigo), and *Notelaea microcarpa* var. *microcarpa*.

The ground cover often contains much leaf litter or bare ground with a very sparse to sparse ground cover of grasses, mat-rushes and ferns. Grass species include *Aristida ramosa*, and *Austrodanthonia fulva*. The mat-rush *Lomandra glauca* and the fern species *Cheilanthes tenuifolia* are also present.

Occurs on foothills of the Liverpool Range and large basalt residuals in the upper Hunter Valley.

The intact and DNG areas of this PCT are consistent with the EEC *White Box Yellow Box Blakely's Red Gum Woodland* under the TSC and EPBC Acts. The presence of this community in the Conservation Area was determined by comparing the 'assemblage of species' present, the 'particular area' in which they occur, and other physical descriptors against the Final Determination (NSW) with regard to the following attributes:

- It occurs in the Mid Western Local Government Area (LGA) and BBS Bioregion where the EEC has previously been recorded.
- It is a woodland/Forest with a canopy dominated by *Eucalyptus albens*, a mid-storey of *Acacia implexa* and *Eucalyptus albens* and a ground layer featuring *Aristida ramosa* and *Bothriochloa macra*, which are characteristic species of the EEC.
- It supports a proportion of species that are in the list of characteristic species for the EEC: 11 out of 43 (26%) native species recorded in this community are in the EEC listing and 11 out of 95 (12%) species in the characteristic species list for the EEC were recorded in this community.

Scribbly Gum - Narrow-leaved Ironbark - *Bossiaea rhombifolia* heathy open forest on sandstone ranges of the Sydney Basin (PCT 1675)

Mid-high to tall open forest dominated by Inland Scribbly Gum (*Eucalyptus rossii*) and Narrow-leaved Ironbark (*Eucalyptus crebra*) with a sub canopy of Black Cypress Pine (*Callitris endlicheri*). The mid-stratum is moderately dense to sparse and shrubby containing *Bossiaea rhombifolia*, *Styphelia triflora*, *Leucopogon muticus*, *Persoonia linearis*, *Leptospermum parvifolium*, *Harmogia densifolia*, *Brachyloma daphnoides*, *Calytrix tetragona* and *Persoonia curvifolia*.

The ground stratum is sparse to moderately dense in patches and comprised primarily of monocots species such as *Patersonia sericea*, *Lomandra multiflora* *Lomandra glauca*, and *Schoenus ericetorum*. The low shrub *Pomax umbellata* is also present.

This community occurs in Munghorn Gap NR; Durridgere SCA and western Goulburn River NP. It is most strongly associated with dissected Narrabeen sandstone at elevations between 400 & 750m.

Broom Bush - *Allocasuarina gymnanthera* heathy woodland on sandstone outcrops of the Sydney Basin (PCT 1709)

Tall Shrub lands dominated by *Melaleuca uncinata* and *Allocasuarina gymnanthera* emergent *Eucalyptus fibrosa* may be present. There is a distinct lower shrub layer with a variable species mix.

The ground stratum is tends to moderately sparse and is composed of mainly graminoid species.

This community occurs on exposed rocky sites; mainly in Goulburn River NP and the surrounding dissected plateaux. Geology is typically Narrabeen Sandstone at elevations between 300 and 400m.

Annexure B, Table 1 shows the area of each plant community type by condition state (see also Diagram F).

Table 1: Plant community types present in the Conservation Area

PCT code	Plant community type (PCT)	Condition	Area (ha)
281	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion	Intact	0.1
		DNG	8.25
403	Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland (southern Brigalow Belt South Bioregion)	Intact	1.7
		DNG	19.97
478	Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern Brigalow Belt South Bioregion	Intact	10.05
479	Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern Brigalow Belt South Bioregion and Sydney Basin Bioregion	Intact	670.65
		DNG	30.08
481	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern Brigalow Belt South Bioregion and Upper Hunter region	Intact	69.83
		DNG	204.89
1310	White Box - Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, Brigalow Belt South Bioregion	Intact	73.8
		DNG	230.21
1675	Scribbly Gum - Narrow-leaved Ironbark - Bossiaea rhombifolia heathy open forest on sandstone ranges of the Sydney Basin	Intact	25.64
1709	Broom Bush - Allocasuarina gymnanthera heathy woodland on sandstone outcrops of the Sydney Basin	Intact	8.43
-	Cleared land	-	16.2
TOTAL			1369.8

B The Conservation Area contains habitat for 30 vulnerable and three endangered species listed under the TSC Act, of these, 10 are also listed as either vulnerable, marine, migratory, endangered or critically endangered under the EPBC Act. A total of 17 threatened fauna species have been previously recorded within the Conservation Area (and refer to Annexure B, Table 3 and Diagram C):

- *Artamus cyanopterus cyanopterus* (Dusky Woodswallow) (V – TSC Act)
- *Calyptorhynchus lathami* (Glossy Black Cockatoo) (V – TSC Act)
- *Chalinolobus dwyeri* (Large-eared Pied Bat) (V - TSC Act, V - EPBC Act)
- *Chthonicola sagittata* (Speckled Warbler) (V – TSC Act)
- *Climacteris picumnus victoriae* (Brown Treecreeper -eastern subspecies) (V – TSC Act)
- *Daphoenositta chrysoptera* (Varied Sittella) (V – TSC Act)
- *Falco subniger* (Black Falcon) (V – TSC Act)
- *Glossopsitta pusilla* (Little Lorikeet) (V – TSC Act)
- *Grantiella picta* (Painted Honeyeater) (V – TSC Act, V – EPBC Act)

- *Haliaeetus leucogaster* (White-bellied Sea Eagle) V – TSC Act, Mar – EPBC Act)
- *Miniopterus schreibersii oceanensis* (Eastern Bentwing-bat) (V – TSC Act)
- *Petaurus norfolcensis* (Squirrel Glider) (V – TSC Act)
- *Petroica boodang* (Scarlet Robin) (V – TSC Act)
- *Petroica phoenicea* (Flame Robin) (V – TSC Act)
- *Pomatostomus temporalis temporalis* (Grey-crowned Babbler -eastern subspecies) (V– TSC Act)
- *Saccolaimus flaviventris* (Yellow-bellied Sheath-tail-bat) (V – TSC Act)
- *Stagonopleura guttata* (Diamond Firetail) (V – TSC Act)

No threatened flora species listed under the TSC or EPBC Act were recorded during surveys undertaken within the Bobadeen Vegetation Offset properties.

The following Endangered Ecological Communities are present in the Conservation Area (see **Diagram D** and **Diagram E**):

- *White Box Yellow Box Blakely's Red Gum Woodland* (EEC – TSC Act, CEEC - EPBC Act)

As shown in **Annexure B, Diagram E** approximately 605 ha of the vegetation present on the Conservation Area corresponds to listed threatened ecological communities under the TSC and / or EPBC Act. These are shown by condition state and listing status.

Annexure B, Table 2: Threatened ecological communities present in the Conservation Area

Threatened ecological community	Condition	TSC listed (ha)	EPBC listed (ha)
White Box Yellow Box Blakely's Red Gum Woodland (TSC Act)/ White Box Yellow Box Blakely's Red Gum Woodland and Derived Native Grassland (EPBC Act)	Intact	262.85	262.85
	DNG	316.64	316.64
Total		579.49	579.49

- C The Conservation Area represents approximately 579.49 ha of ecologically significant vegetation and fauna habitat and is considered a significant addition to flora and fauna species conservation outcomes in the Hunter-Central Rivers CMA. There is good connectivity between the Conservation Area and adjacent woodland areas, particularly from the north and south of the site. The Conservation Area also has connectivity values with other areas: The Durrigere State Conservation Area is located approximately 3.9 km to the north east and the Goulburn River National Park is 3.6km to the southeast with bushland corridors available to both. In addition, the regeneration of the derived native grasslands in the Conservation Area will likely improve habitat corridor linkages around and within the area.
- D The Conservation Area adjoins Bobadeen Grinding Groove Conservation Agreement, therefore it is likely that the Conservation Area contains cultural heritage values.

Annexure B, Table 3: Threatened fauna species found within 10km radius of site which may occur within the Conservation Area due to the presence of suitable habitat (search conducted February 2017).

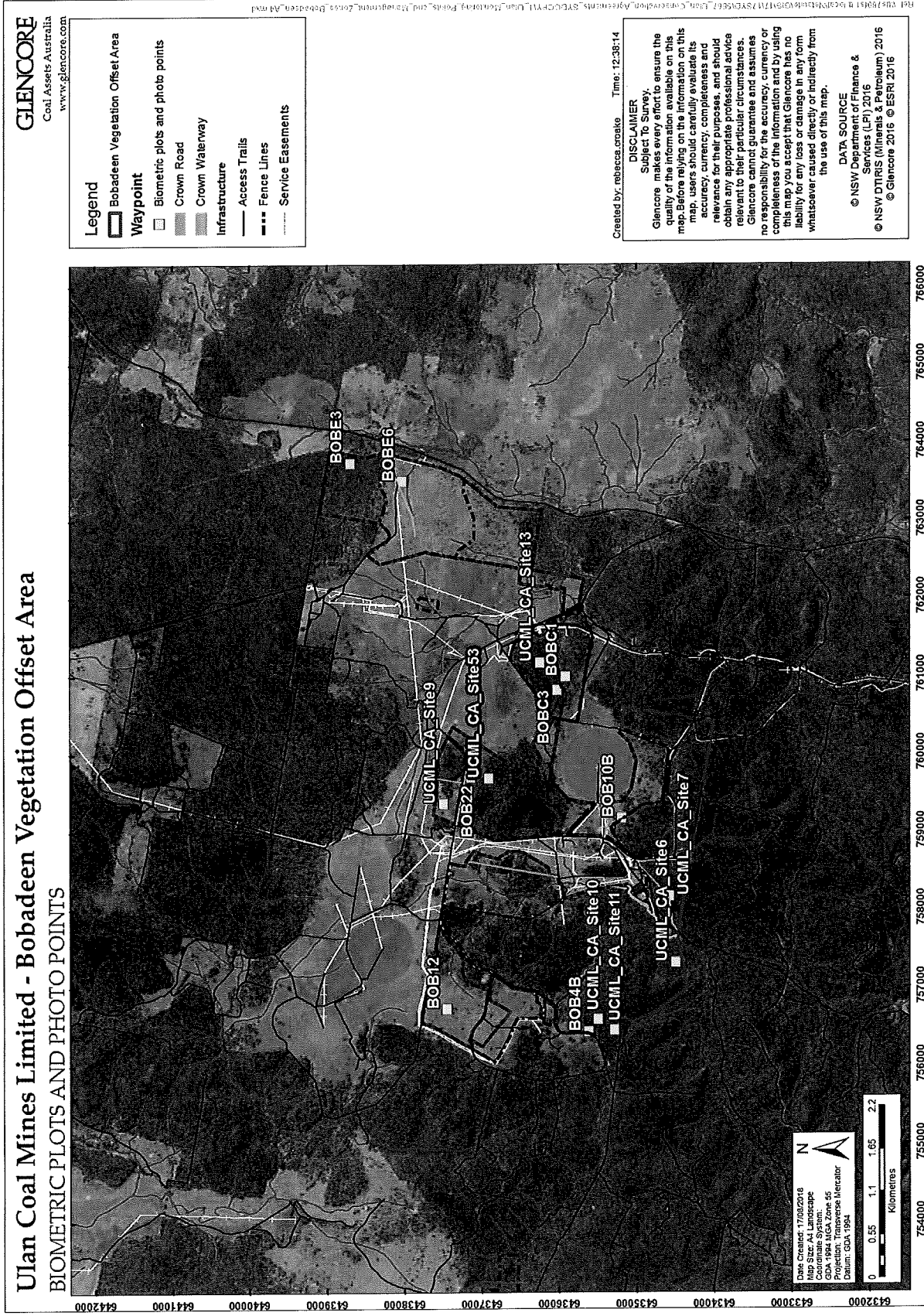
Common Species Name	Scientific Species Name	TSC Act Listing	EPBC Act Listing	Confirmed on site Y/N
Birds				
Dusky Woodswallow	<i>Artamus cyanopterus cyanopterus</i>	V		Y
Gang-gang Cockatoo	<i>Callocephalon fimbriatum</i>	V		N
Glossy Black Cockatoo	<i>Calyptorhynchus lathami</i>	V		Y
Speckled Warbler	<i>Chthonicola sagittata</i>	V		Y
Spotted Harrier	<i>Circus assimilis</i>	V		N
Brown Treecreeper (eastern subspecies)	<i>Climacteris picumnus victoriae</i>	V		Y
Varied Sittella	<i>Daphoenositta chrysoptera</i>	V		Y
Black Falcon	<i>Falco subniger</i>	V		Y
Little Lorikeet	<i>Glossopsitta pusilla</i>	V		Y
Painted Honeyeater	<i>Grantiella picta</i>	V	V	Y
White-bellied Sea Eagle	<i>Haliaeetus leucogaster</i>	V	Mar	Y
Little Eagle	<i>Hieraetus morphnoides</i>	V		N
Swift Parrot	<i>Lathamus discolor</i>	E	CE, M	N
Malleefowl	<i>Leipoa ocellata</i>	E	V	N
Hooded Robin (south-eastern form)	<i>Melanodryas cucullata cucullata</i>	V		N
Black-chinned Honeyeater (eastern subs.)	<i>Melithreptus gularis gularis</i>	V		N
Turquoise Parrot	<i>Neophema pulchella</i>	V		N
Powerful Owl	<i>Ninox strenua</i>	V		N
Scarlet Robin	<i>Petroica boodang</i>	V		Y
Flame Robin	<i>Petroica phoenicea</i>	V		Y
Grey-crowned Babbler (eastern subspecies)	<i>Pomatostomus temporalis temporalis</i>	V		Y
Diamond Firetail	<i>Stagonopleura guttata</i>	V		Y
Mammals				
Large-eared Pied Bat	<i>Chalinolobus dwyeri</i>	V	V	Y
Spotted-tail Quoll	<i>Dasyurus maculatus</i>	V	E	N
Eastern Bentwing-bat	<i>Miniopterus schreibersii oceanensis</i>	V		Y
Corben's Long-eared Bat	<i>Nyctophilus corbeni</i>	V	V	N
Squirrel Glider	<i>Petaurus norfolcensis</i>	V		Y
Brush-tailed Rock-Wallaby	<i>Petrogale penicillata</i>	E	V	N
Koala	<i>Phascolarctos cinereus</i>	V	V	N
Grey-headed Flying Fox	<i>Pteropus poliocephalus</i>	V	V	N
Yellow-bellied Sheathtail-	<i>Saccolaimus flaviventris</i>	V		Y

Common Species Name	Scientific Species Name	TSC Act Listing	EPBC Act Listing	Confirmed on site Y/N
bat				
Flora				
Ausfeld's Wattle	<i>Acacia ausfeldii</i>	V		N
Capertee Stringybark	<i>Eucalyptus cannonii</i>	V		N
Ecological communities				
White Box Yellow Box Blakely's Red Gum Woodland		EEC	CEEC	Y

V= Vulnerable, E= Endangered, CE= Critically Endangered, M= Migratory, Mar= Marine, E2= Endangered Population, EEC= Endangered Ecological Community, CEEC= Critically Endangered Ecological Community

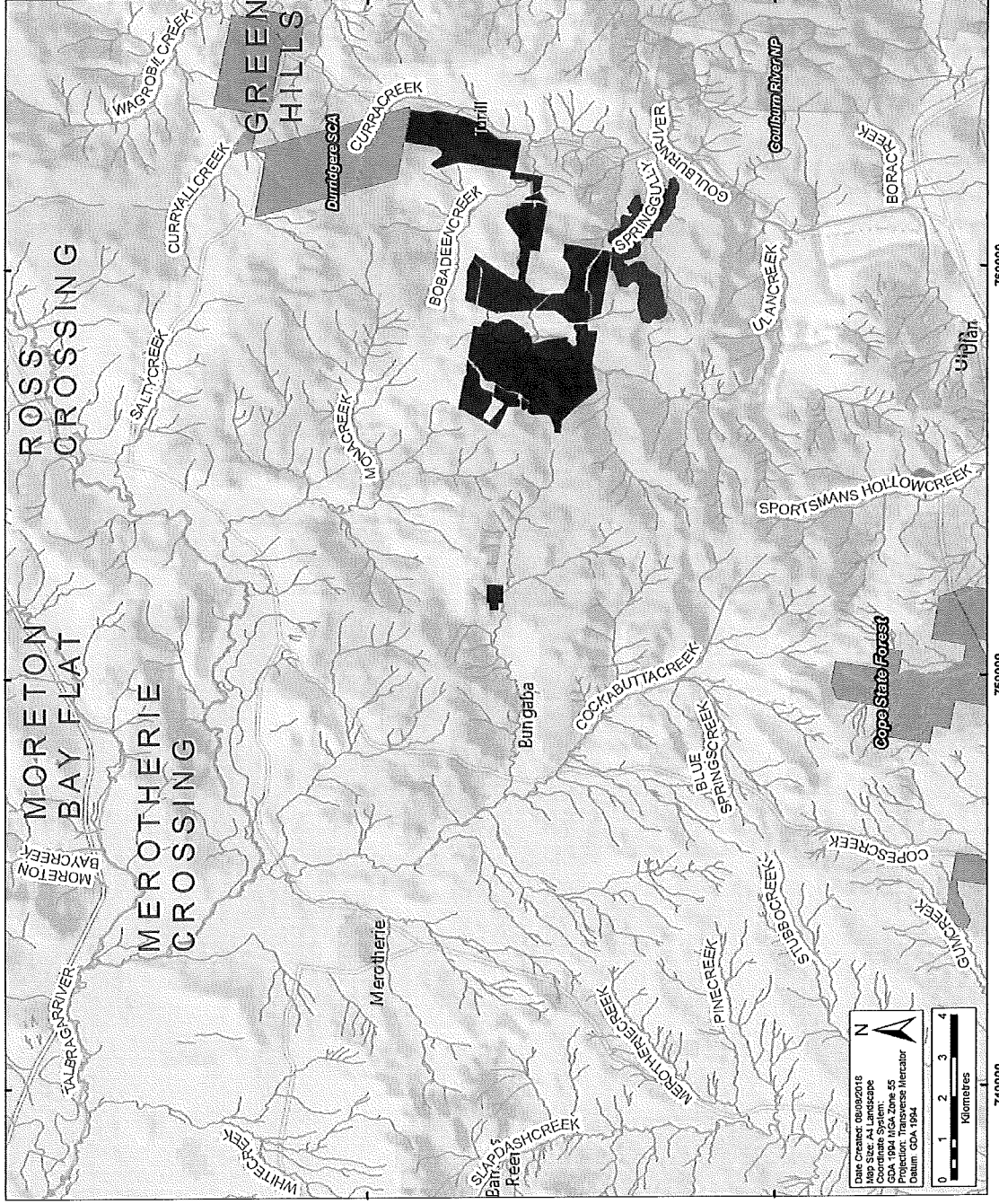
ANNEXURE B – DIAGRAM A: LOCATION OF BIOMETRIC PLOTS AND PHOTO POINTS

**Ulan Coal Mines Limited - Bobadeen Vegetation Offset Area
BIOMETRIC PLOTS AND PHOTO POINTS**



ANNEXURE B – DIAGRAM B: REGIONAL LOCATION OF PROPERTY

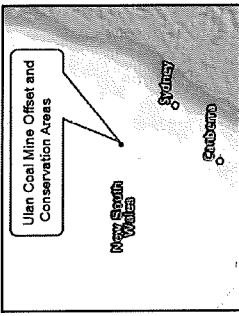
Ulan Coal Mines Limited - Conservation Areas and Offset Areas
REGIONAL LOCATION OF PROPERTIES



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Legend

- Bobadeen Vegetation Offset Area
- Brokenback Conservation Area - Area 1
- Brokenback Conservation Area - Area 2
- Hightett Road Acacia ausfeldii Management Area
- Spring Gully Cliffline Management Area
- State Forests
- NPWS Estate



Created by: rebecca.croake
Time: 09:40:02

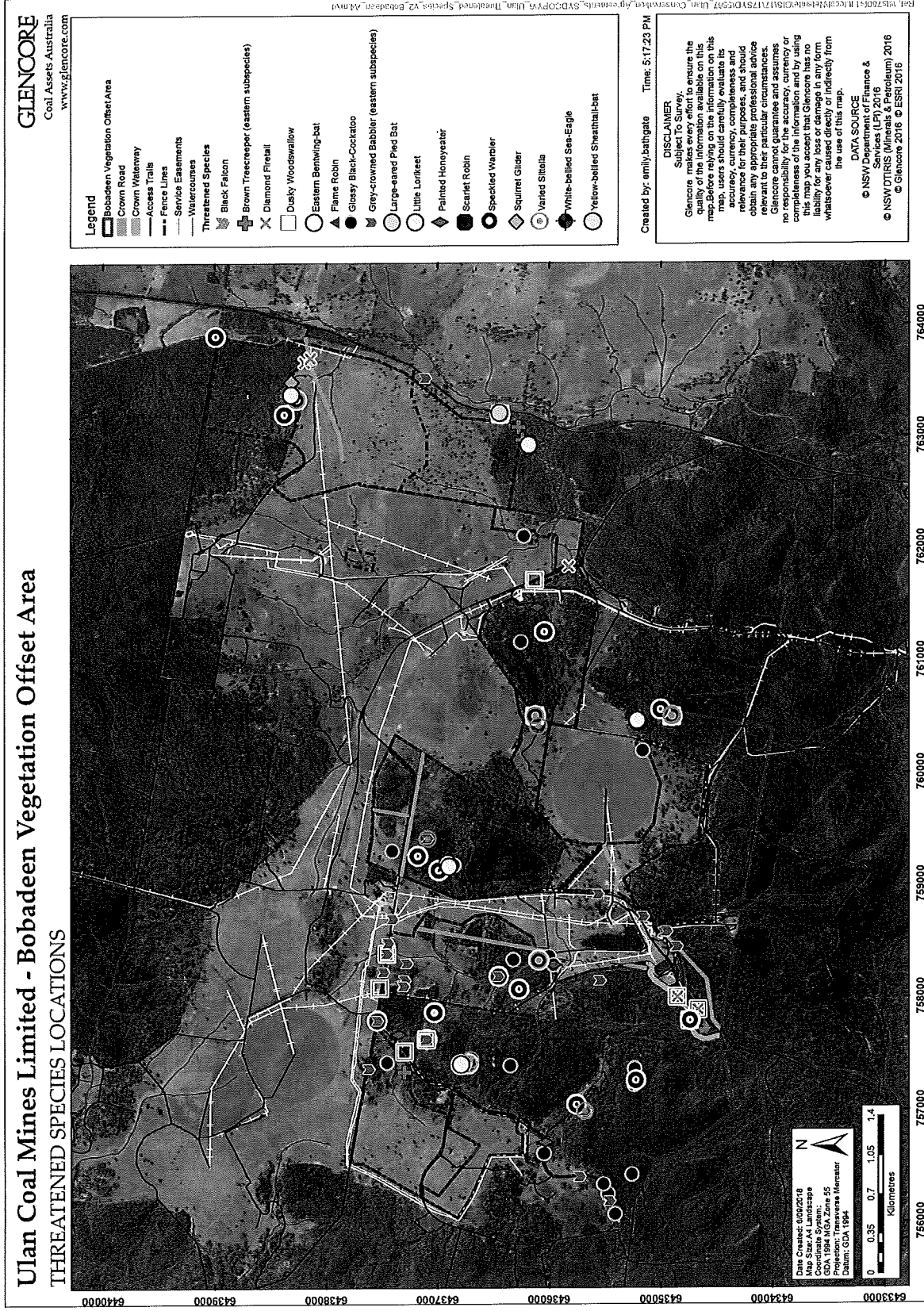
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Initials *AS* 27

ANNEXURE B – DIAGRAM C: THREATENED SPECIES LOCATIONS

Ulan Coal Mines Limited - Bobadeen Vegetation Offset Area THREATENED SPECIES LOCATIONS



Initials *CA* 15 28

ANNEXURE B – DIAGRAM D: THREATENED ECOLOGICAL COMMUNITIES (TSC ACT)

Ulan Coal Mines Limited - Bobadeen Vegetation Offset Area
THREATENED ECOLOGICAL COMMUNITIES (TSC Act)

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- Legend**
- Bobadeen Vegetation Offset Area
 - Crown Road
 - Crown Waterway
 - Access Trails
 - Fence Lines
 - Service Easements
 - Watercourses

- Threatened Ecological Communities (TSC Act)**
- White Box - Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, Brigalow Belt South Bioregion - EEC
 - Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion - EEC
 - Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland (southern Brigalow Belt South Bioregion) - EEC

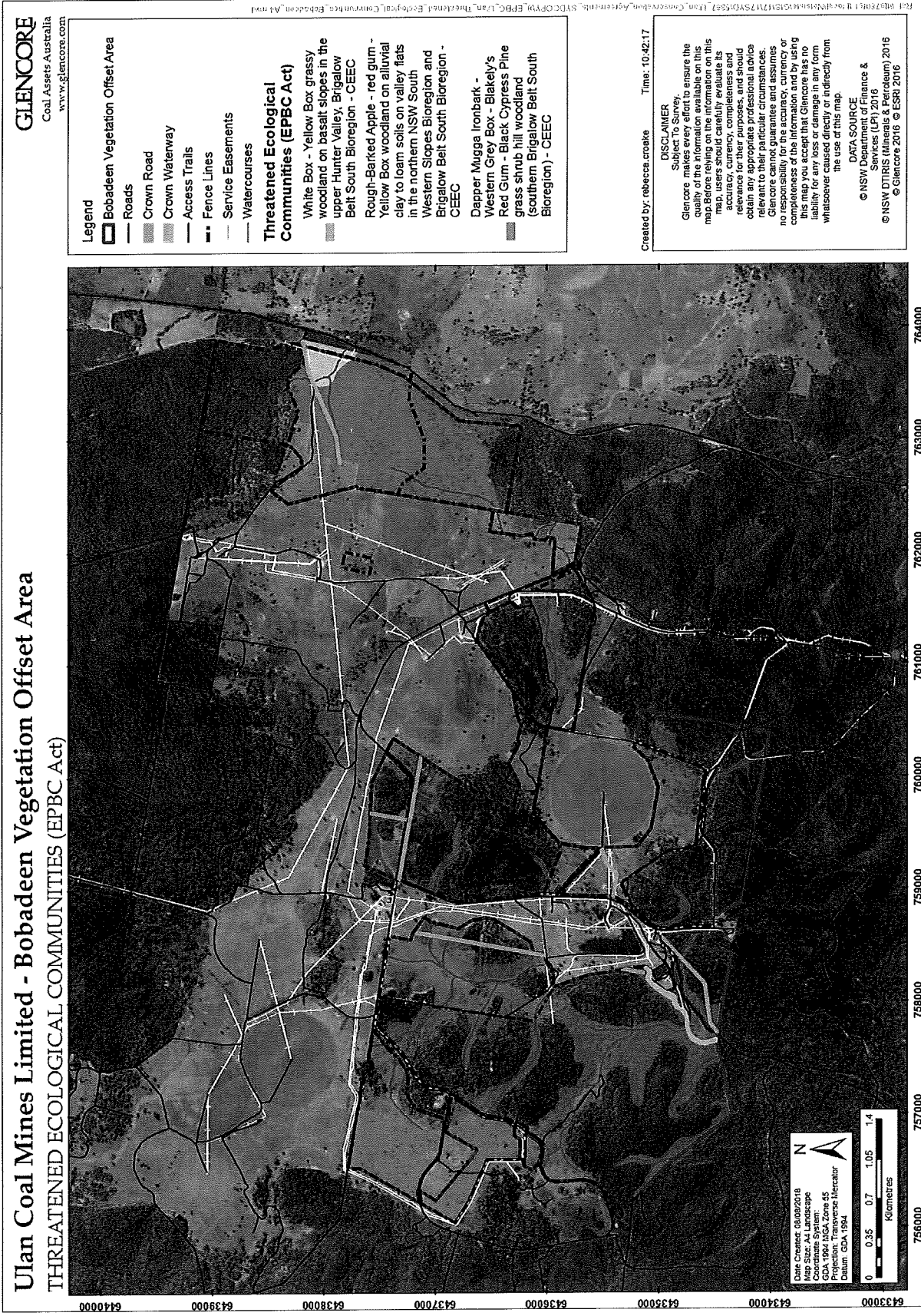
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ANNEXURE B – DIAGRAM E: THREATENED ECOLOGICAL COMMUNITIES (EPBC ACT)

**Ulan Coal Mines Limited - Bobadeen Vegetation Offset Area
THREATENED ECOLOGICAL COMMUNITIES (EPBC Act)**



Initials *A.K* 30

ANNEXURE B – DIAGRAM G: MANAGEMENT ZONES

Ulan Coal Mines Limited - Bobadeen Vegetation Offset Area
MANAGEMENT ZONES



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- Legend**
- Bobadeen Vegetation Offset Area
 - Crown Road
 - Crown Waterway
 - Access Trails
 - Fence Lines
 - Service Easements
 - Watercourses
- Management Zones**
- Benchmark Vegetation
 - Natural Regeneration
 - Assisted Revegetation

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Initials *CA* 32

ANNEXURE B – PHOTO POINT PHOTOGRAPHS

Four photos were taken at each monitoring site in a clockwise direction, with the first photo orientated north from the star picket (start of the transect), followed by east, south and west. Compass directions of each photo from the star picket are given below and GPS reference points for each site are provided in **Annexure D, Table 1**.

Photos taken in February 2017 are presented below.

Sites BOBE2 and UCML_CA_Site12 removed due to unsuitable site locations. Additional monitoring sites may be incorporated overtime.

BOB4B monitors an area of White Box – Yellow Box – Blakely’s Red Gum grassy woodland. The canopy and mid-storey is dominated by *Eucalyptus albens* (White Box) with *Acacia implexa* (Hickory Wattle) also present in the mid-storey. The ground layer is dominated by *Aristida vagans* (Three-awn Speargrass), *Rytidosperma caespitosum* (Ringed Wallaby Grass) and *Dichondra sp. A* (Kidney Weed).

Weed cover is low with *Conyza sp.* (Fleabane) and *Cirsium vulgare* (Spear Thistle) forming the dominant exotic species in the site. The noxious weed *Rosa rubiginosa* (Sweet Briar) is also present within the site.



North (0°) (February 2017)



East (90°) (February 2017)



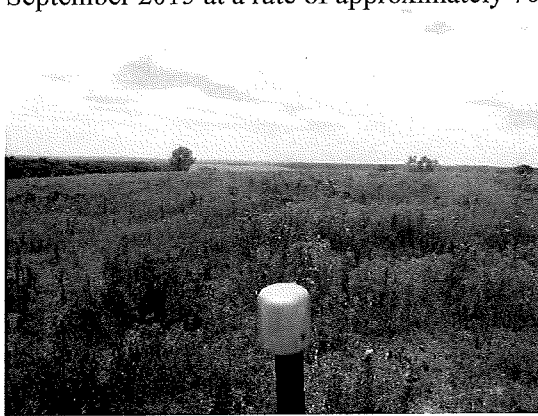
South (180°) (February 2017)



West (270°) (February 2017)

BOB12 monitors an area of regenerating White Box – Yellow Box – Blakely’s Red Gum grassy woodland. The canopy and mid-storey is absent, whilst the ground layer is dominated by *Aristida vagans* (Three-awn Speargrass), *Aristida ramosa* (Purple Wiregrass), *Bothriochloa macra* (Red Grass) and *Carthamus lanatus* (Saffron Thistle).

Weed cover is high with *Conyza sp.* (Fleabane) and *Cirsium vulgare* (Spear Thistle), along with the aforementioned *Carthamus lanatus*, forming the dominant exotic species in the site. The noxious weed *Hypericum perforatum* (St John’s Wort) is also present within the site. Regeneration activities included ripping, mounding and hoeing to create a friable bed for planting and seeding. Tubestock of *Eucalyptus albens*, *Acacia hakeoides* and *Indigofera australis* were planted into prepared hilled/rip lines in September 2015 at a rate of approximately 700 plants per Ha. Plants were watered twice after planting.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

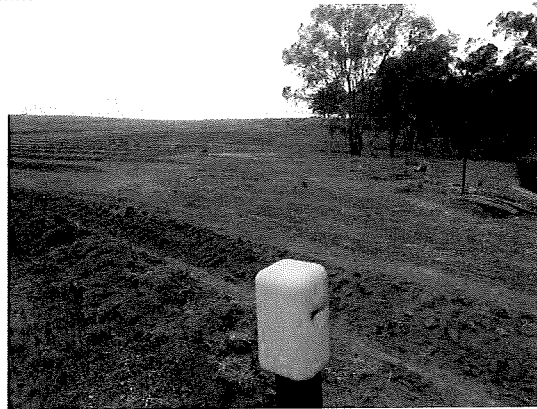
BOB10B monitors an area of regenerating Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark open forest. The canopy and mid-storey is absent, whilst the ground layer is dominated by *Aristida vagans* (Three-awn Speargrass), *Sporobolus creber* (Slender Rat's Tail Grass) and *Eragrostis leptostachya* (Paddock Lovegrass).

No exotic species were recorded within the site during the site visit however, several exotic species have been recorded during previous monitoring. Regeneration activities included scalping to expose topsoil and push existing seed bank to the side, which minimises weed competition. Ripping, mounding and hoeing was conducted to create a friable bed for planting and seeding.

Tubestock of *Angophora floribunda*, *Eucalyptus Blakelyi*, *Astroloma humifusum*, *melaleuca thymifolia*, *Acacia linearifolia* and *Gahnia aspera* were planted into prepared hilled/rip lines in November 2016 at a rate of approximately 500 plants per Ha. Conditions were relatively hot and dry and plants were watered three times. Supplementary hand seeding of *Eucalyptus Blakelyi*, *Astroloma humifusum*, *melaleuca thymifolia*, *Acacia linearifolia* and *Gahnia aspera* was conducted, spreading seed between the tubestock at a seeding rate of approximately 200 grams per Ha.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

BOBC1 monitors an area of Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark open forest. The canopy is dominated by *Eucalyptus blakelyi* (Blakely's Red Gum) and *Eucalyptus melliodora* (Yellow Box). *Acacia implexa* (Hickory Wattle) and *Cassinia arcuata* (Sifton Bush) dominate the mid-storey, whilst the ground layer is dominated by *Aristida vagans* (Three-awn Speargrass), *Aristida ramosa* (Purple Wiregrass) and *Austrostipa scabra* (Speargrass).

Weed cover is low with *Conyza sp.* (Fleabane) and *Cirsium vulgare* (Spear Thistle) present within the site.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



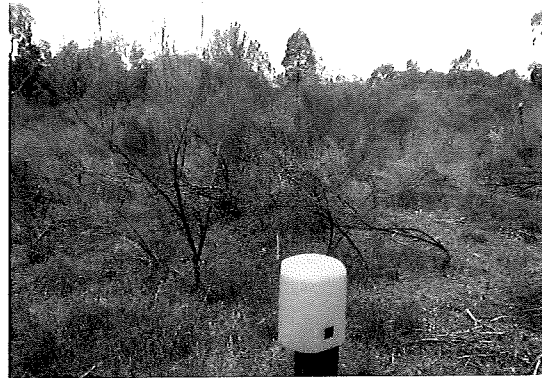
West (270°) (February 2017)

BOB22 monitors an area of regenerating Narrow-leaved Ironbark- Black Cypress Pine – stringybark shrubby open forest. The canopy is dominated by *Angophora floribunda* (Rough-barked Apple) with a mid-storey of *Cassinia arcuata* (Sifton Bush). The ground layer is dominated by *Aristida vagans* (Three-awn Speargrass), *Aristida ramosa* (Purple Wiregrass) and *Juncus sp.* (Rush).

Weed cover is low with *Conyza sp.* (Fleabane) present within the site.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

BOBE3 monitors an area of Narrow-leaved Ironbark- Black Cypress Pine – stringybark shrubby open forest. The canopy is dominated by *Eucalyptus crebra* (Narrow-leaved Ironbark) and *Acacia linearifolia* (Narrow-leaved Wattle), with a mid-storey of *Cassinia quinquefaria*. The ground layer is dominated by *Microlaena stipoides* (Weeping Grass), *Poranthera microphylla* and *Cassinia quinquefaria*.

No exotic species were recorded within the site.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

BOBE6 monitors an area of regenerating Rough-barked Apple – red gum – Yellow Box woodland. The canopy and mid-storey is absent with the ground layer dominated by *Sporobolus creber* (Slender Rat's Tail Grass), *Bothriochloa macra* (Red Grass) and *Carthamus lanatus* (Saffron Thistle).

Weed cover is moderate with *Conyza sp.* (Fleabane) and *Bromus hordeaceus* (Soft Brome), along with the aforementioned *Carthamus lanatus* the dominant exotic species present within the site.

Regeneration activities included scalping to expose topsoil and push existing seed bank to the side, which minimises weed competition. Ripping, mounding and hoeing was conducted to create a friable bed for planting and seeding.

Tubestock of *Eucalyptus albens*, *Acacia hakeoides* and *Indigofera australis* were planted into prepared hilled/rip lines in April 2016 at a rate of approximately 700 plants per Ha. Conditions were relatively hot and dry and plants were watered three times. Supplementary hand seeding of *Eucalyptus albens*, *Acacia hakeoides* and *Indigofera australis* was conducted, spreading seed between the tube stock at a seeding rate of approximately 200 grams per Ha.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

BOBC3 monitors an area of Red Ironbark- Black Cypress Pine – stringybark open forest. The canopy is dominated by *Eucalyptus crebra* (Narrow-leaved Ironbark), *Eucalyptus sparsifolia* (Narrow-leaved Stringybark) and *Angophora floribunda* (Rough-barked Apple). The mid-storey is dominated by *Cassinia arcuata* (Sifton Bush) and *Acrotriche rigida*. The ground layer is dominated by *Microlaena stipoides* (Weeping Grass), *Rytidosperma sp.* (Wallaby Grass) and *Einadia hastata* (Berry Saltbush).

Weed cover is low with *Conyza sp.* (Fleabane) and *Petrorhagia nanteuilii* the dominant exotic species present within the site.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

UCML_CA_Site6 monitors an area of Scribbly Gum - Narrow-leaved Ironbark - *Bossiaea rhombifolia* heathy open forest. The canopy is dominated by *Eucalyptus rossii* (Inland Scribbly Gum), *Eucalyptus blakelyi* (Blakely's Red Gum) and *Eucalyptus crebra* (Narrow-leaved Ironbark). The mid-storey is dominated by *Cassinia arcuata* (Sifton Bush), *Leucopogon muticus* (Blunt Beard-heath) and *Persoonia linearis* (Narrow-leaved Geebung), whilst the ground layer is dominated by *Microlaena stipoides* (Weeping Grass), *Pomax umbellata* and *Lomandra confertifolia* (Mat-rush).

Weed cover is low with *Hypochaeris radicata* (Catsear) present within the site.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

UCML_CA_Site7 monitors an area of Scribbly Gum - Narrow-leaved Ironbark - *Bossiaea rhombifolia* heathy open forest. The canopy is dominated by *Eucalyptus rossii* (Inland Scribbly Gum), *Angophora floribunda* (Rough-barked Apple) and *Eucalyptus crebra* (Narrow-leaved Ironbark). The mid-storey is dominated by *Bossiaea rhombifolia* and *Persoonia linearis* (Narrow-leaved Geebung), whilst the ground layer is dominated by *Microlaena stipoides* (Weeping Grass), *Pomax umbellata* and *Gahnia aspera* (Rough Saw-sedge).

Weed cover is low with *Hypochoeris radicata* (Catscar) present within the site.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

UCML_CA_Site9 monitors an area of regenerating Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland. The canopy is dominated by *Eucalyptus microcarpa* (Inland Grey Box) with *Cassinia arcuata* (Sifton Bush) present in the mid-storey. The ground layer is dominated by *Aristida ramosa* (Purple Wiregrass), *Bothriochloa macra* (Red Grass) and *Rytidosperma sp.* (Wallaby Grass).

Weed cover is moderate with *Bromus hordeaceus* (Soft Brome), *Vulpia sp.* and *Petrorhagia nanteuilii* the dominant exotic species present within the site. Regeneration activities included scalping to expose topsoil and push existing seed bank to the side, which minimises weed competition. Ripping, mounding and hoeing was conducted to create a friable bed for planting and seeding.

Tube stock of *Angophora floribunda*, *Eucalyptus blakeyi*, *Eucalyptus meliodora* and *Eucalyptus crebra*, *fibrosa* and *agglomerata sp.* were planted into prepared hilled/rip lines in November 2016 at a rate of approximately 500 plants per Ha. Plants were planted into good soil moisture and watered once after planting and once later. Supplementary hand seeding of Rough bark Apple and Ironbark vegetation communities (20 species) was conducted, spreading seed between the tube stock at a seeding rate of approximately 200 grams per Ha.



North (0°) (February 2017)



East (90°) (February 2017)



South (180°) (February 2017)



West (270°) (February 2017)

UCML_CA_Site53 monitors an area of Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland. The canopy features *Eucalyptus microcarpa* (Inland Grey Box), *Eucalyptus sideroxylon* (Mugga Ironbark) and Red Ironbark. Narrow-leaved Wattle, Hickory Wattle and *Allocasuarina gymnanthera* form a sub-canopy whilst, *Cassinia arcuata* (Sifton Bush) and *Acrotriche rigida* are present in the mid-storey. The ground layer is sparse and includes native *Aristida* spp. grasses and Rough Saw-sedge.

No exotic species were recorded within the site.



North (0°) (January 2018)



East (90°) (January 2018)



South (180°) (January 2018)



West (270°) (January 2018)

ANNEXURE C – MANAGEMENT OF THE CONSERVATION AREA

ITEM 1: MANAGEMENT AIMS AND ACTIONS REQUIRED TO BE UNDERTAKEN FOR MINIMUM PERIOD OF 10 YEARS. ALL ACTIONS TO BE UNDERTAKEN IN ACCORDANCE WITH ANNEXURE C ITEM 3 PERMISSIONS AND GUIDELINES.

Aim	Timing	Management action	Indicative cost for management action
Revegetation Works	Completed		
Reseeding/Replanting for increasing understory diversity/canopy where required	Years 2-5	Allowance for poor germination - replanting as recommended following monitoring- Calculated at 10% of total planting costs (i.e. Propagation, planting, direct seed and seeding activity)	\$14,000 per year \$140,000 total
Selective thinning of dense stands of revegetation	Years 5-10	Allowance for selective thinning of revegetation, if identified by monitoring	\$2,000 per year \$20,000 total
Weed Control	Years 1-10	St John's Wort continues to be the most common and abundant priority weed across the site. However, chemical control may risk negatively affecting native ground cover, and as such should be approached in a targeted, spot-application manner in line with the requirements of the <i>Noxious Weeds Act 1993</i> . The costing is based on annual labour costs for weed control activities plus chemical and mechanical control allowance.	\$25,000 per year \$250,000 total

Aim	Timing	Management action	Indicative cost for management action
Vertebrate Pest Control	Years 1-10	Includes control activities for foxes, dogs and pigs (1080 baiting), cat trapping and rabbit poisoning.	\$15,000 per year \$150,000 total
Maintain vehicle access to Conservation Area for visitor management, fire management, weed and fencing management	Years 1-10	Vehicle access is maintained as part of ongoing mine operations and therefore is not considered to be a management cost related to this Conservation Area.	N/A
Managing visitor impacts (visitors include OEH inspectors; weed control contractors; fire maintenance contractors; NSW Rural Fire Service; fencing and maintenance contractors and the Owner)	Years 1-10	The Owner must ensure that visitor disturbance to the Conservation Area is minimised by keeping visitors to tracks and trails except for management purposes and ensuring all visitor vehicles and equipment entering the Conservation Area are clean and free from weeds and/or seeds. Guidance specified in Annexure C Item 3 Visitation and research must be used.	N/A
Fauna habitat augmentation (introduction of logs, rocks or construction of ponds)	Years 1-10	Replace nest boxes/maintenance where required.	N/A

Aim	Timing	Management action	Indicative cost for management action
Fire management ecological / hazard reduction / pile burn (if required)	Years 1-10. Liaise with RFS and NPWS regarding appropriate timing.	No ecological burns currently proposed in Bobadeen Offset Area Bushfire Management Plan. Should burning be recommended following future revisions of the Bushfire Management Plan, guidelines specified in Annexure C Item 3 must be followed. Operate with NSW Rural Fire Service or fire management contractor to implement mosaic or partial area hazard reduction burn.	N/A
Maintain boundary fencing	Years 1-10	Maintenance of fencing and gates.	\$10,000 per year \$100,000 total
Aboriginal Places and Aboriginal Objects	Years 1-10	The Owner must preserve and protect Aboriginal Places and Aboriginal Objects and other sites of cultural heritage significance on or in the Conservation Area and in accordance with the relevant legislation.	N/A
Annual Reporting including inspections	Years 1-10	Prepare annual reports according to specifications in Annexure D Monitoring Program	\$9,000 per report \$90,000 total
Monitoring of Offset Areas	Years 1-10	Monitoring for revegetation success within offset areas	\$57,000per year \$570,000 total
Nest Boxes	Years 1-10	Monitoring of fauna use, maintenance and replacement.	\$8,000 per year \$80,000 total
Review of plan	Year 2, 5 & 8		\$45,000 per occurrence \$135,000 total

Aim	Timing	Management action	Indicative cost for management action
Independent review	Year 3, 6 & 9		\$12,500 per occurrence \$37,500 total
Indicative cost for 10 year period			\$1,5725,00

**ANNEXURE C – MANAGEMENT OF THE CONSERVATION AREA
ITEM 2: MANAGEMENT ACTIONS REQUIRED TO BE UNDERTAKEN FROM YEAR 11 ONWARDS.
ALL ACTIONS TO BE COMPLETED ACCORDING TO ANNEXURE C ITEM 3 PERMISSIONS AND GUIDELINES.**

Issue	Management action
Exotic plants	The Owner must take reasonable measures in relation to the control of exotic plants. Techniques specified in Annexure C Item 3 must be used.
Pest animals	The Owner must take reasonable measures in relation to monitoring of pest animals. Techniques specified in Annexure C Item 3 must be used.
Threatened species, populations and endangered ecological communities (EEC)	The Owner must follow current best practice advice regarding the management of threatened species when carrying out any activities within the Conservation Area. This advice may be provided by OEH, Local Land Services, the Commonwealth Department of Environment or subsequent authorities.
Managing visitor impacts (visitors include OEH inspectors; weed control contractors; fire maintenance contractors; NSW Rural Fire Service; fencing and maintenance contractors and the Owner)	The Owner must take reasonable measures to ensure that visitor disturbance to the Conservation Area is minimised by keeping visitors to tracks and trails except for management purposes and ensuring all visitor vehicles and equipment entering the Conservation Area are clean and free from weeds and/or seeds. Guidance specified in Annexure C Item 3 Visitation and research must be used.
Maintain vehicle access to Conservation Area for visitor management, fire management, weed and fencing management	The Owner must take reasonable measures to ensure that vehicle access is maintained by maintaining and repairing access trails as required. Techniques specified in Annexure C Item 3 must be used.
Monitoring and Reporting	The Owner must complete a monitoring report at least every 3 years as described in Clause 8 of the Conservation Agreement.
Livestock	The Owner must remove any livestock which have entered the Conservation Area as soon as practical.
Aboriginal Places and Aboriginal Objects	The Owner must preserve and protect Aboriginal Places and Aboriginal Objects and other sites of cultural heritage significance on or in the Conservation Area and in accordance with the relevant legislation.
Fencing	The Owner must take reasonable measures to construct and maintain fences along the boundaries of the Conservation Area where adjacent land use cause or are likely to cause adverse impacts on or in the Conservation Area. Techniques specified in Annexure C Item 3 must be used.

ANNEXURE C – ITEM 3: PERMISSIONS AND GUIDELINES

Control of pest animals and non-indigenous fauna (in addition to pest animal control management actions in Items 1 and 2 of Annexure C to the Conservation Agreement)

- a) Participate in community pest animal control programs, and encourage neighbours to implement pest animal control programs. Contact your Local Land Services office or National Parks and Wildlife Service Area office to find out where community control programs are occurring.
- b) Methods for pest animal control can include; shooting, trapping and use of poisonous baits consistent with advice from OEH and Local Land Services. Use control methods identified as ‘humane’ as defined in the NSW Codes of Practice and Standard Operating Procedures for Humane Pest Vertebrate Control (Control Capture and Destruction of Feral Animals in Australia) as developed by the NSW Department of Primary Industries.
- c) Pest animal control activities to be determined based on density and species of pest animals. Methods for monitoring pest animal activity should include:
 - i) observations and/or hearing calls,
 - ii) the use of standard “sand plots” or camera stations,
 - iii) the use of non-poisoned “bait stations”,
 - iv) scat counts, and
 - v) other quantitative techniques which can be designed in discussion with OEH or Local Land Services.

Control of weeds and exotic plants (in addition to weed control management actions in Items 1 and 2 of Annexure C to the Conservation Agreement)

- d) Apply a range of techniques including:
 - i) Removal of weeds by hand ensuring that all plant parts which can reproduce are removed and that soils do not become prone to erosion.
 - ii) Use of carefully selected herbicide according to label directions and/or current off label permit, ensuring minimal off target damage.
 - iii) Use of appropriate control measures as recommended in the Department of Primary Industries Noxious and Environmental Weed Control Handbook 6th Edition 2014 or equivalent replacements for control of weeds, ensuring minimal off target damage.
 - iv) Use of forestry mulching or slashing machinery only with prior written permission from OEH.
 - v) Ensure control programs are commenced when timing and extent of weed removal will minimise adverse effects on wildlife (weeds may provide protection or habitat for native fauna). Dense thickets of woody weeds should be removed gradually in mosaic patterns to minimise disturbance to the habitat of native animals.
 - vi) Other weed control methods may only be undertaken with prior written permission of OEH.
 - vii) Contact OEH if any uncertainty exists regarding weed control methods.

Cultural heritage

- e) Recording and management of any newly identified Aboriginal Objects or artefacts, in consultation with OEH (and the relevant local Aboriginal community where applicable).

Development

- f) Carrying out any development as described in the Conservation Agreement and maintaining development (including existing fire trails, access trails and infrastructure), with the following conditions:
- i) clear a corridor not greater than 3 metres wide during construction or for maintenance for the installation of fences or other agreed rural structures;
 - ii) move fallen timber and any other obstructions to maintain access trails, tracks and fences;
 - iii) where clearing is permitted under the Agreement and necessary, undertake all works in a manner that minimises disturbance to soil and hydrological characteristics.

Easements

- g) Management of easements for electricity, water and other purposes should be undertaken managed with the intent of minimum environmental impact.

Fencing, tracks and trails

- h) Construction and maintenance of all fences using wildlife friendly materials including plain wire (non-barbed) on top and bottom strands, unless OEH has given prior written approval to adopt a different construction approach.
- i) Construction of any new internal fence, access track or trail only with prior written approval from OEH.
- j) Maintaining existing access vehicular trails in the Conservation Area to a maximum width of 4m with 1m either side permissible for clearing.
- k) Removal of old fences and closing of unwanted tracks within the Conservation Area and facilitate restoration of indigenous vegetation according to Annexure C Item 3 (points 'n' and 'o' over page).

Fire management (in addition to fire management actions in Item 1 of Annexure C to the Conservation Agreement)

- l) Using fire hazard reduction burns and controlled burning which take into account the recommended fire intervals given in the *Bush Fire Environmental Assessment Code for New South Wales* (Rural Fire Service February 2006), *Final Fire Management Plan Goulburn River National Park and Munghorn Gap Nature Reserve* (DEC2004) and the guidelines contained in the *Threatened Species Hazard Reduction Lists for the Bush Fire Environmental Assessment Code* or equivalent replacements.

Current recommendations are:

- i) Minimum fire intervals of:
 - 10 – 40 year fire interval for remnant areas of Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and BBS Bioregion (PCT281), Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern BBS Bioregion (PCT478), Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern BBS Bioregion and Sydney Basin Bioregion (PCT479), Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern BBS Bioregion and Upper Hunter region (PCT481), Scribbly Gum - Narrow-leaved Ironbark - Bossiaea rhombifolia heathy open forest on sandstone ranges of the Sydney Basin (PCT1675) and Broom Bush - Allocasuarina gymnanthera heathy woodland on sandstone outcrops of the Sydney Basin (PCT1709),

- 8 - 20 year fire interval for Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland (southern BBS Bioregion) (PCT403) and White Box - Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, BBS Bioregion (PCT1310), and
 - 50 – 100 year fire interval for areas of regenerating or rehabilitated vegetation regardless of its PCT type.
- ii) wherever possible canopy or crown fires should be avoided.
 - iii) wherever possible no more than 50% of the Conservation Area should be burnt in any twelve month period.
 - iv) both live and dead trees with hollows should be protected from burning as far as practicable in order to preserve nesting habitat for hollow dwelling animals.
- m) Lighting a fire, or causing a fire to be lit on the Conservation Area if it complies with the *Rural Fires Act 1997* (NSW), and:
- i) the lighting of the fire is a necessary component of bush fire hazard reduction work carried out in accordance with a notice served on the Owner under the Rural Fires Act 1997 (NSW) or other applicable legislation; or
 - ii) life or property is in immediate threat by bush fire and the lighting of the fire is reasonably necessary to protect life or property; or
 - iii) the fire is a camp fire, subject to the compliance with the Rural Fires Act 1997 (NSW), or
 - iv) the Chief-Executive gives prior written consent to the lighting of the fire.

Restoration of indigenous vegetation

- n) Restoration of native vegetation on the Conservation Area using a preferred method of encouraging and retaining natural regeneration. Preferred methods include:
- i) bush regeneration
 - ii) brush mulching;
 - iii) tube stock planting, and/or
 - iv) direct seeding.
- o) Revegetation to establish indigenous plants to maintain the vegetation structure in keeping with the identified vegetation community, using species produced from material sourced locally and without fertilisers, where the ability to regenerate naturally within a reasonable time frame has been lost, or to prevent soil erosion.

Seed collection

- p) Collection of seed on the Conservation Area for non-commercial use in accordance with Guidelines and Codes of Practice developed by Florabank (www.florabank.org.au), or subsequent equivalent and with the following limitations and permissions:
- i) Collect seed in the Conservation Area only if seed of the particular species and genotype is not available elsewhere, or if the seed collected is intended for seedlings that will be planted within the Conservation Area or adjacent to the Conservation Area.
 - ii) Seeds may be collected from within endangered ecological communities.
 - iii) Seeds may not be collected from species individually listed in Schedules 1, 1A or 2 to the TSC Act without prior written approval from the Chief-Executive, or under a licence granted under section 132C of the NPW Act or section 91 of the TSC Act.

- iv) Seeds may be collected from any protected species listed in Schedule 13 to the NPW Act.
- v) Seeds may be collected from any other native species.

Thinning of indigenous vegetation

- q) Thinning of regenerating indigenous species which are altering the structure of the vegetation in the Conservation Area and/or reducing the Conservation Values only with prior written approval from the Chief-Executive OEH.
- r) Thinning permitted within revegetation areas for first 10 years only and thinning beyond this only with written permission from Chief Executive.

Threatened species

- s) Implementing any measures included in recovery plans for any threatened species, population or ecological communities which are or may be found in the Conservation Area.
- t) Implementing other specific management advice from OEH for any threatened species, populations or ecological communities which are or may be found in the Conservation Area.

Use of timber

- u) Harvesting of fallen non-hollow wood in amounts necessary for heating the Owner's dwelling on the Land and camp fires on the Conservation Area.

Visitation and research (in addition to management actions in Items 1 and 2 of Annexure C to the Conservation Agreement)

- v) Visitation, research and community use at a level that does not adversely impact on the Conservation Values or the amenity of the Owner. Research projects must be first discussed with OEH before being carried out.

ANNEXURE D – MONITORING PROGRAM

- (a) The Owner must engage a suitably qualified person (such as an ecologist) to undertake monitoring within the Conservation Area, beginning in 2019 (Monitoring Event). The frequency of monitoring activities will be targeted by site type:
- i. Active regeneration sites are to be monitored annually five years after planting/revegetation has been undertaken (estimated commencement 2019); and
 - ii. Reference sites are to be monitored annually commencing 2019.
- (b) Each Reference Site Monitoring Event must include:
- i) **photo monitoring** – Four photos are required to be taken at each of the four monitoring photo points. Photos must be taken from the exact location and bearing to allow subsequent comparison and assessment. Photo point locations are provided in **Table 1** of Annexure D to the Conservation Agreement (**below**). Baseline photographs are provided in Annexure B to the Conservation Agreement;
 - ii) **quadrat monitoring** – Quadrat data must be collected at each of the four floristic quadrat monitoring sites. Quadrat locations are provided in **Table 1** of Annexure D to the Conservation Agreement (**below**). Results must be compared to baseline and benchmark quadrat data which is provided in **Tables 1 and 2** of Annexure D to the Conservation Agreement **below**.
 - iii) a **walk through assessment** to record opportunistic sightings within the Conservation Area including:
 - i. fire events or impacts of fire management
 - ii. weeds (including compiling a list of exotic species and recording new weed infestations including location and extent)
 - iii. pest animals (species and location must be recorded, including evidence of pest animals such as burrows, scats or disturbance)
 - iv. visitor impact and vehicle access (including evidence of any recent usage, and the presence of any new access tracks)
 - v. rubbish dumping
 - vi. natural regeneration of previously disturbed areas; and
 - vii. sightings of threatened species.
- (c) After each Monitoring Event, the Owner must produce a monitoring report on the Conservation Area by December 30 of each year, beginning in 2019 (Monitoring Report).

The Monitoring Report must include:

- i. a description of all completed management actions undertaken in the previous 12 month period;
- ii. completed monitoring data sheets (including photographs) using the template provided in **Table 3** of Annexure D to the Conservation Agreement (**below**);
- iii. a discussion of the changes recorded at monitoring points and quadrats;
- iv. a discussion of the condition of Conservation Values;
- v. a discussion of effectiveness of any management actions implemented; and
- vi. recommendations and proposed management actions to be performed in following year(s).

The Monitoring Report must be submitted to OEHL within **21 days** of it being received by the Owner.

- (d) The Owner must retain receipts from third party contractors engaged by the Owner to undertake management actions listed in items 1 and 2 of Annexure C to the Conservation Agreement and provide to OEHL copies of those receipts upon request by OEHL.

- (e) The Monitoring Event and the Monitoring Report comprise the monitoring program (Monitoring Program). The Owner must complete the Monitoring Program to the satisfaction of OEH, for a minimum period of 10 years from the date of the Conservation Agreement.

ANNEXURE D – TABLE 1: MONITORING POINT LOCATIONS AND CORRESPONDING VEGETATION COMMUNITIES REPRESENTED AS AT MARCH 2017

Photo Point / Quadrat No.	Easting/Northing GDA 94 MGA 55	Vegetation Community Represented
BOB4B	756420, 6435619	White Box- Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, BBS Bioregion
BOB12	756714, 6437455	White Box- Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, BBS Bioregion
BOB10B	759155, 6435199	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern BBS Bioregion and Upper Hunter region
BOB22	759685, 6437141	Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern BBS Bioregion and Sydney Basin Bioregion
BOBC1	760976, 6435920	Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern BBS Bioregion and Upper Hunter region
BOBC3	760801, 6436024	Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern BBS Bioregion
BOBE3	763721, 6438701	Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern BBS Bioregion and Sydney Basin Bioregion
BOBE6	763490, 6438029	Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and BBS Bioregion
UCML_CA_Site6	757309, 6434494	Scribbly Gum - Narrow-leaved Ironbark - Bossiaea rhombifolia heathy open forest on sandstone ranges of the Sydney Basin
UCML_CA_Site7	758158, 6434577	Scribbly Gum - Narrow-leaved Ironbark - Bossiaea rhombifolia heathy open forest on sandstone ranges of the Sydney Basin
UCML_CA_Site9	759348, 6437497	Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland (southern BBS Bioregion)
UCML_CA_Site10	756576, 6435497	Broom Bush - Allocasuarina gymnanthera heathy woodland on sandstone outcrops of the Sydney Basin
UCML_CA_Site11	756444, 6435292	Broom Bush - Allocasuarina gymnanthera heathy woodland on sandstone outcrops of the Sydney Basin

Photo Point / Quadrat No.	Easting/Northing GDA 94 MGA 55	Vegetation Community Represented
UCML_CA_Site13	761156, 6436250	Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern BBS Bioregion
UCML_CA_Site53	759731, 6436898	Dapper Mugga Ironbark – Western Grey Box – Blakely's Red Gum – Black Cyprus Pine grass shrub hill woodland (southern BBS Bioregion)

ANNEXURE D – TABLE 2 – PCT VEGETATION TYPE BENCHMARKS AND BASELINE QUADRAT SCORES AS AT DECEMBER 2016

Photo Point / Quadrat No.	Native species richness	Overstorey cover %pfc	Mid-storey cover %pfc	Ground cover – grasses %pfc	Ground cover – shrubs %pfc	Ground cover – other %pfc	Proportion overstorey regen. (%)	Exotic cover	Number of Trees with Hollows	Total length of fallen logs
281 Rough-Barked Apple - red gum - Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and BBS Bioregion (HU714)										
Benchmark values	25	10	2	20	2	5	N/A	N/A	1.5	30
BOBE6	15	0	0	46	0	8	100	56	0	0
403 Dapper Mugga Ironbark - Western Grey Box - Blakely's Red Gum - Black Cypress Pine grass shrub hill woodland (southern BBS Bioregion (HU698)										
Benchmark values	30	10	2	2	2	2	N/A	N/A	2	20
UCML_CA_Site9	32	0	0	28	0	2	100	12	0	0
UCML_CA_Site53	29	10	0.2	2	2	10	100	0	0	135
478 Red Ironbark - Black Cypress Pine - stringybark +/- Narrow-leaved Wattle shrubby open forest on sandstone in the Gulgong - Mendooran region, southern BBS Bioregion (HU707)										
Benchmark values	25	20	10	5	5	5	N/A	N/A	0.8	46
BOBC3	39	21	8	14	6	6	100	0	2	16.5
UCML_CA_Site13	29	45	1.5	0	0	2	100	0	0	151
479 Narrow-leaved Ironbark- Black Cypress Pine - stringybark +/- Grey Gum +/- Narrow-leaved Wattle shrubby open forest on sandstone hills in the southern BBS Bioregion and Sydney Basin Bioregion (HU702)										
Benchmark values	31	5	2	2	2	2	N/A	N/A	2	40
BOB22	21	2	1	84	0	4	67	0	0	0
BOBE3	17	26.5	9	2	2	0	100	0	0	123
481 Rough-barked Apple - Blakely's Red Gum - Narrow-leaved Stringybark +/- Grey Gum sandstone riparian grass fern open forest on in the southern BBS Bioregion and Upper Hunter region (HU713)										
Benchmark values	31	10	5	0	10	5	N/A	N/A	1.5	10
BOB10B	21	0	0	62	0	2	100	20	0	0
BOBC1	36	13.5	6	22	6	4	100	0	2	22
1310 White Box - Yellow Box grassy woodland on basalt slopes in the upper Hunter Valley, BBS Bioregion (HU654)										
Benchmark values	23	10	5	5	2	5	N/A	N/A	2	50
BOB4B	27	19.5	0	16	0	2	100	0	0	24
BOB12	25	0	0	50	0	0	0	28	0	0
1675 Scribbly Gum - Narrow-leaved Ironbark - Bossiaea rhombifolia heathy open forest on sandstone ranges of the Sydney Basin (HU889)										
Benchmark values	35	15	8	1	15	20	N/A	N/A	0.2	30
UCML_CA_Site6	44	20	2.5	10	8	2	100	0	0	42
UCML_CA_Site7	48	20	0	8	10	8	100	0	0	57
1709 Broom Bush - Allocasuarina gymnanthera heathy woodland on sandstone outcrops of the Sydney Basin										

Photo Point / Quadrat No.	Native species richness	Overstorey cover %pfc	Mid-storey cover %pfc	Ground cover – grasses %pfc	Ground cover – shrubs %pfc	Ground cover – other %pfc	Proportion overstorey regen. (%)	Exotic cover	Number of Trees with Hollows	Total length of fallen logs
(HU923)										
Benchmark values	25	20	10	5	5	5	N/A	N/A	0.8	66
UCML_CA_Site10	33	18.5	2	2	4	2	100	0	0	20
UCML_CA_Site11	31	17	0	0	2	4	100	0	0	13.5

ANNEXURE D – TABLE 3 - MONITORING DATA SHEET

Monitoring Data Sheet			
Monitoring Point Number		Date	
Vegetation Community			
1. Site Photo(s) Taken			
2. Floristic attributes			
Native cover			
Overstorey:			
Midstorey:			
Groundcover(grass):			
Groundcover (shrub):			
Groundcover (other):			
Native species richness:			
Proportion of canopy species regenerating			
Exotic cover			
Number of trees with hollows			
Total length of fallen logs			
3. Opportunistic observations	GPS coordinates	Photo number	Observations
Natural regeneration of disturbed areas			
Threatened species sightings			
Fire event/fuel			
Weeds			
Pest animals			
Visitor impact/vehicles			
Rubbish dumping			

Charles Alan Callan

Ulan Coal Mines Limited Director (Print name and sign)

Ian Gough

Ulan Coal Mines Limited Director (Print name and sign)

ANTHONY LEAM

Chief Executive OEH (Print name and sign)



Robert Williams

ROBERT WILLIAMS

ARDROB PTY LIMITED as leaseholders of Lot 1 DP 701346 consent to this agreement (Print name and sign)

<<End of Agreement to be signed by all parties to the Agreement>>