



**CERTIFICATE OF ANALYSIS**

Preliminary Report  
 Final Report

30-Jul-12

Coal Valley Resources Inc.  
 1600 Oxford Tower  
 10235-101 Street  
 Edmonton, AB  
 T5J 3G1, Canada

WORKORDER: RC12020428

Hole: RT-11-680C  
 Seam: Mynheer  
 Diameter: 63.5mm  
 Depth: 49.8m to 56.98m  
 Plies: Upper

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

AIR-DRIED BASIS

SIZE: +12.5mm						
S.G.	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	135	3.7	6.68	6.74	6677	0.0
S1.35 - F1.40	913	25.4	6.86	10.34	6295	0.0
S1.40 - F1.45	696	19.3	6.06	15.18	5960	0.0
S1.45 - F1.50	226	6.3	5.82	21.96	5459	0.0
S1.50 - F1.55	236	6.6	5.43	28.43	4984	0.0
S1.55 - F1.60	259	7.2	5.22	29.52	4573	0.0
S1.60 - F1.70	237	6.6	4.51	37.26	4150	*
S1.70 - F1.80	282	7.8	4.17	41.43	3556	*
S1.80 - F1.90	123	3.4	3.37	50.10	2780	*
S1.90 - F2.00	212	5.9	2.73	50.29	2304	*
S2.00	279	7.8	2.59	72.78	1173	*

D4371  
 D3172  
 D4239  
 D720

SIZE: -12.5mm x +1.0mm						
S.G.	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	45	1.0	6.44	3.15	6911	0.0
S1.30 - F1.35	961	21.3	6.68	4.99	6655	0.0
S1.35 - F1.40	1100	24.4	6.27	9.56	6321	0.0
S1.40 - F1.45	598	13.3	5.91	14.74	5953	0.0
S1.45 - F1.50	265	5.9	5.77	19.30	5543	0.0
S1.50 - F1.55	224	5.0	5.50	25.37	5117	0.0
S1.55 - F1.60	147	3.2	5.56	30.83	4669	0.0
S1.60 - F1.70	209	4.6	5.03	37.92	4124	*
S1.70 - F1.80	198	4.4	4.71	45.90	3479	*
S1.80 - F1.90	161	3.6	4.50	53.27	2820	*
S1.90 - F2.00	146	3.2	4.36	59.90	2223	*
S2.00	457	10.1	3.81	75.81	805	*

SIZE: 1mm x 0.15mm						
S.G.	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	11	0.8	6.23	3.57	6875	0.5
S1.30 - F1.35	243	16.1	6.43	3.60	6689	0.0
S1.35 - F1.40	240	15.9	6.95	7.20	6371	0.0
S1.40 - F1.45	121	8.0	6.50	11.84	6032	0.0
S1.45 - F1.50	93	6.2	5.90	15.62	5748	0.0
S1.50 - F1.55	57	3.8	6.08	19.00	5399	0.0
S1.55 - F1.60	35	2.3	6.37	24.08	4989	0.0
S1.60 - F1.70	70	4.6	6.01	30.71	4437	*
S1.70 - F1.80	57	3.8	5.67	40.44	3675	*
S1.80 - F1.90	60	4.0	5.38	49.65	2930	*
S1.90 - F2.00	70	4.7	5.34	57.82	2307	*
S2.00	453	30.0	5.18	75.83	461	*

**FROTH FLOTATION**

SIZE: 0.15mm x 0.038mm						
TIME	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
15 SEC	16	4.3	5.86	11.42	6104	0.0
30 SEC	7	2.0	6.08	11.89	6075	0.0
60 SEC	7	1.8	6.07	13.78	5896	0.0
90 SEC	3	0.9	NSS	15.09	5748	0.0
Tails (T2)	22	6.0	8.01	46.95	2971	0.0
Tails (T1)	309	84.9	9.06	61.10	1535	0.0
PARAMETERS:	10% PULP DENSITY, COND. TIME 90 SECOND 0.667 KG/T 10.1 KERO:MIBC, DENVER CELL, 1200 RPM					

**FINES**

SIZE: -0.038mm		
Mois %	Ash %	GCV (kcal/kg)
9.67	68.56	1027

NSS = Not Sufficient Sample  
 We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard  
 Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager



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**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

S.G	CUMULATIVE WEIGHT % SIZE: +12.5mm					
	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	3.7	3.7	6.68	6.74	6677	0.0
S1.35 - F1.40	25.4	29.1	6.84	9.88	6344	0.0
S1.40 - F1.45	19.3	48.5	6.53	11.99	6191	0.0
S1.45 - F1.50	6.3	54.8	6.45	13.14	6107	0.0
S1.50 - F1.55	6.6	61.3	6.34	14.77	5987	0.0
S1.55 - F1.60	7.2	68.5	6.22	16.32	5838	0.0
S1.60 - F1.70	6.6	75.1	6.07	18.16	5690	-
S1.70 - F1.80	7.8	82.9	5.89	20.36	5489	-
S1.80 - F1.90	3.4	86.4	5.79	21.54	5381	-
S1.90 - F2.00	5.9	92.2	5.59	23.37	5185	-
S2.00	7.8	100.0	5.36	27.20	4874	-

D4371  
 D3172  
 D4239  
 D720

S.G	CUMULATIVE WEIGHT % SIZE: 12.5mm x 1.0mm					
	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	1.0	1.0	6.44	3.15	6911	0.0
S1.30 - F1.35	21.3	22.3	6.67	4.91	6667	0.0
S1.35 - F1.40	24.4	46.7	6.46	7.34	6486	0.0
S1.40 - F1.45	13.3	59.9	6.34	8.97	6368	0.0
S1.45 - F1.50	5.9	65.8	6.29	9.90	6295	0.0
S1.50 - F1.55	5.0	70.8	6.23	10.98	6212	0.0
S1.55 - F1.60	3.2	74.0	6.20	11.85	6144	0.0
S1.60 - F1.70	4.6	78.7	6.13	13.39	6025	-
S1.70 - F1.80	4.4	83.1	6.06	15.11	5891	-
S1.80 - F1.90	3.6	86.6	5.99	16.68	5764	-
S1.90 - F2.00	3.2	89.9	5.94	18.24	5636	-
S2.00	10.1	100.0	5.72	24.07	5147	-

S.G	CUMULATIVE WEIGHT % SIZE: 1mm x 0.15mm					
	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	0.8	0.8	6.23	3.57	6875	0.5
S1.30 - F1.35	16.1	16.9	6.42	3.60	6697	0.0
S1.35 - F1.40	15.9	32.7	6.68	5.34	6539	0.0
S1.40 - F1.45	8.0	40.7	6.64	6.62	6439	0.0
S1.45 - F1.50	6.2	46.9	6.54	7.81	6348	0.0
S1.50 - F1.55	3.8	50.7	6.51	8.65	6277	0.0
S1.55 - F1.60	2.3	53.0	6.50	9.32	6221	0.0
S1.60 - F1.70	4.6	57.6	6.46	11.03	6078	-
S1.70 - F1.80	3.8	61.4	6.42	12.85	5930	-
S1.80 - F1.90	4.0	65.4	6.35	15.08	5747	-
S1.90 - F2.00	4.7	70.0	6.29	17.93	5519	-
S2.00	30.0	100.0	5.95	35.27	4004	-

**FROTH FLOTATION**

TIME	CUMULATIVE WEIGHT % SIZE 0.15mm x 0.038mm					
	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
15 SEC (P2)	4.3	4.3	5.86	11.42	6104	0.0
30 SEC (P3)	2.0	6.3	5.93	11.57	6095	0.0
60 SEC (P4)	1.8	8.1	5.96	12.06	6050	0.0
90 SEC (P5)	0.9	9.0	-	12.36	6021	0.0
Tails (T2)	6.0	15.1	-	26.25	4796	0.0
Tails (T1)	84.9	100.0	-	55.85	2027	0.0

**FINES**

CUMULATIVE WEIGHT % SIZE: -0.038mm		
Mois %	Ash %	CV (kcal/kg)
9.67	68.56	1027

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager

Robb Trend Project

Coal Sample Results – 2012 Core Program

RT-11-680C

Mynheer Seam

Sample Horizon: 58.2 to 59.7

ALS LABORATORY GROUP – COAL DIVISION  
RICHMOND BC CANADA  
11191 Coppersmith Place, Richmond BC V7A 5H1 Canada  
Tel: +1 604 241 3166 Fax: +1 604 241 3126 Email: adrian.reifenstein@alsglobal.com



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Final Report

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WORKORDER: RC12020979

Hole: RT-11-680C  
Seam: Mynheer  
Diameter: 63.5mm  
Depth: 58.2m to 59.7m  
Plies: Lower

**Raw Analysis**

	Wt (g)	Mois%	Ash%	VM%	F.C.%	S%	CV (kcal/kg)	Cl %	RD
Raw Coal	5119	6.80	19.80	31.70	41.70	0.30	5454	<0.01	1.48

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard  
Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager





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Plies: Lower

DRY SIZING

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+0.15	3679	95.8	95.8
-0.15	160	4.2	100.0

**ASTM Standard  
of Analysis**

D4749  
(split with RSD)

**\*All losses allocated to -0.15mm fraction**

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<original signed by>

Brett Warden  
Laboratory Manager

ALS LABORATORY GROUP – COAL DIVISION

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Depth: 58.2m to 59.7m  
Plies: Lower

ANALYSIS

ASTM Standard  
of Analysis

LOAD SINK ANALYSIS

AIR-DRIED BASIS

SIZE: +0.15mm						
S.G.	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	118	3.2	6.62	4.30	6866	0.0
S1.30 - F1.35	678	18.5	6.64	7.36	6538	0.0
S1.35 - F1.40	940	25.6	6.45	10.75	6216	0.0
S1.40 - F1.45	619	16.9	5.02	16.41	5784	0.0
S1.45 - F1.50	339	9.2	5.77	20.79	5428	0.0
S1.50 - F1.55	190	5.2	4.63	24.42	5094	0.0
S1.55 - F1.60	141	3.8	4.17	29.84	4676	0.0
S1.60 - F1.70	189	5.1	3.69	34.03	4286	*
S1.70 - F1.80	104	2.8	3.19	38.05	3744	*
S1.80 - F1.90	72	2.0	3.18	52.25	2870	*
S1.90 - F2.00	93	2.5	3.18	63.11	2197	*
S2.00	188	5.1	4.52	73.27	996	*

D4371  
D3172  
D4239  
D720

FINES

SIZE: -0.15mm			
Mois %	Ash %	GCV (kcal/kg)	FSI
6.4	39.83	3577	0.0

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard methods of analysis of Coal.

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Laboratory Manager



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 Diameter: 63.5mm  
 Depth: 58.2m to 59.7m  
 Plies: Lower

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

CUMULATIVE WEIGHT % SIZE: +0.15mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	3.2	3.2	6.62	4.30	6866	0.0
S1.30 - F1.35	18.5	21.7	6.64	6.90	6587	0.0
S1.35 - F1.40	25.6	47.3	6.54	8.99	6386	0.0
S1.40 - F1.45	16.9	64.1	6.14	10.94	6228	0.0
S1.45 - F1.50	9.2	73.4	6.09	12.18	6127	0.0
S1.50 - F1.55	5.2	78.6	5.99	12.99	6059	0.0
S1.55 - F1.60	3.8	82.4	5.91	13.77	5994	0.0
S1.60 - F1.70	5.1	87.6	5.78	14.96	5894	-
S1.70 - F1.80	2.8	90.4	5.70	15.69	5826	-
S1.80 - F1.90	2.0	92.4	5.64	16.46	5764	-
S1.90 - F2.00	2.5	94.9	5.58	17.70	5669	-
S2.00	5.1	100.0	5.52	20.55	5430	-

D4371  
 D3172  
 D4239  
 D720

**FINES**

CUMULATIVE WEIGHT % SIZE: -0.15mm			
Mois %	Ash %	CV (kcal/kg)	FSI
6.40	39.83	3577	0.0

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager

Robb Trend Project

Coal Sample Results – 2012 Core Program

RT-11-737C

Mynheer Seam

Sample Horizon: 62.8 to 65.8



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Coal Valley Resources Inc.  
1600 Oxford Tower  
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WORKORDER: RC12020556

Hole: RT-11-737C  
Seam: Mynheer  
Diameter: 63.5mm  
Depth: 62.8m to 65.8m  
Plies: Upper

Raw Analysis

	Wt (g)	Mois%	Ash%	VM%	F.C.%	S%	CV (kcal/kg)	CI %	RD	ARD
Raw Coal	12400	6.56	23.99	29.02	40.43	0.23	5000	0.01	1.57	1.49

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager



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Seam: Mynheer  
Diameter: 63.5mm  
Depth: 62.8m to 65.8m  
Plies: Upper

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SIZING AFTER 20 DROPS

Size (mm)	Weight (g)	Weight %
+50	534	4.3
-50	11866	95.7

We certify the analysis reported hereon was determined in accordance with the modified procedure for Drop Shatter Testing.

<original signed by>

Brett Warden  
Laboratory Manager





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Plies: Upper

DRY SIZING

ASTM Standard  
of Analysis

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	605	4.9	4.9
-31.5+25	545	4.4	9.3
-25+16	806	6.5	15.8
-16+8	1500	12.1	27.9
-8+4	1677	13.5	41.4
-4+2	2098	16.9	58.3
-2	5168	41.7	100.0

D4749  
(split with RSD)

\*All losses allocated to -2mm fraction

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 Seam: Mynheer  
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 Plies: Upper

WET SIZING

ASTM Standard  
 of Analysis

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+31.5	123	1.3	1.3
+25	150	1.6	3.0
+16	379	4.1	7.0
+12.5	313	3.4	10.4
+8	807	8.7	19.2
+4	1339	14.5	33.6
+2	1688	18.3	51.9
+1	1728	18.7	70.6
+0.5	1346	14.6	85.1
+0.25	545	5.9	91.0
+0.15	196	2.1	93.1
+0.063	249	2.7	95.8
+0.038	99	1.1	96.9
-0.038	290	3.1	100.0

D4749  
 (split with RSD)

\*All losses allocated to -0.038mm fraction

Sample was attrited in maximum 50kg lots with 18 cubes and 150 L of water or equivalent mass for 5 min @ 20 rpm

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AIR-DRIED BASIS

SIZE: +12.5mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.35	25	2.6	7.18	6.07	6503	0.0
S1.35 - F1.40	194	20.1	7.20	10.99	6197	0.0
S1.40 - F1.45	150	15.5	6.99	14.48	5882	0.0
S1.45 - F1.50	121	12.5	6.71	19.42	5495	0.0
S1.50 - F1.55	40	4.2	6.19	22.94	5177	0.0
S1.55 - F1.60	35	3.6	5.66	30.92	4633	0.0
S1.60 - F1.70	18	1.8	4.66	33.19	4232	*
S1.70 - F1.80	121	12.5	4.29	34.08	3401	*
S1.80 - F1.90	154	15.9	3.70	34.24	2928	*
S1.90 - F2.00	4	0.4	3.31	37.77	2708	*
S2.00	105	10.8	1.88	47.30	1404	*

D4371  
 D3172  
 D4239  
 D720

SIZE: -12.5mm x +1.0mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	78	1.4	6.83	3.53	6832	0.0
S1.30 - F1.35	1199	21.5	6.97	5.00	6557	0.0
S1.35 - F1.40	1418	25.5	6.36	9.63	6249	0.0
S1.40 - F1.45	917	16.5	6.05	14.36	5925	0.0
S1.45 - F1.50	426	7.6	5.85	18.97	5554	0.0
S1.50 - F1.55	300	5.4	5.64	24.31	5125	0.0
S1.55 - F1.60	205	3.7	5.31	30.25	4685	0.0
S1.60 - F1.70	288	5.2	4.74	36.76	4115	*
S1.70 - F1.80	277	5.0	4.42	43.06	3465	*
S1.80 - F1.90	148	2.7	4.10	49.71	2768	*
S1.90 - F2.00	105	1.9	3.82	57.25	2166	*
S2.00	209	3.7	3.15	67.39	998	*

SIZE: 1mm x 0.15mm						
S.G	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	7	0.7	6.15	3.05	7002	0.0
S1.30 - F1.35	270	26.2	7.23	3.75	6588	0.0
S1.35 - F1.40	193	18.7	6.82	7.98	6288	0.0
S1.40 - F1.45	93	9.0	6.44	12.54	5963	0.0
S1.45 - F1.50	60	5.8	6.41	16.00	5664	0.0
S1.50 - F1.55	52	5.0	6.16	19.72	5385	0.0
S1.55 - F1.60	28	2.7	6.31	25.82	4886	0.0
S1.60 - F1.70	46	4.5	5.97	33.64	4239	*
S1.70 - F1.80	40	3.9	5.65	41.76	3558	*
S1.80 - F1.90	28	2.7	5.41	48.85	3014	*
S1.90 - F2.00	27	2.6	5.31	56.30	2374	*
S2.00	185	18.0	4.56	74.20	463	*

**FROTH FLOTATION**

SIZE: 0.15mm x 0.038mm						
TIME	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
15 SEC	15	8.7	5.71	8.39	6768	0.0
30 SEC	4	2.4	NSS	9.84	6417	0.0
60 SEC	2	1.3	NSS	12.33	NSS	0.0
90 SEC	2	1.2	NSS	13.29	NSS	0.0
Tails (T2)	4	2.3	NSS	41.15	NSS	0.0
Tails (T1)	146	84.2	7.46	53.32	2357	0.0

PARAMETERS: 10% PULP DENSITY, COND. TIME 90 SECOND  
 0.667 KG/T 10:1 KERO MIBC, DENVER CELL, 1200 RPM

**FINES**

SIZE: -0.038mm		
Mois %	Ash %	GCV (kcal/kg)
7.41	68.38	1287

NSS = Not Sufficient Sample

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager



**CERTIFICATE OF ANALYSIS**

Preliminary Report  
 Final Report

30-Jul-12

Coal Valley Resources Inc.  
 1600 Oxford Tower  
 10235-101 Street  
 Edmonton, AB  
 T5J 3G1, Canada

WORKORDER: RC12020556

Hole: RT-11-737C  
 Seam: Mynheer  
 Diameter: 83.5mm  
 Depth: 62.8m to 65.8m  
 Plies: Upper

**ANALYSIS**

ASTM Standard  
 of Analysis

**FLOAT SINK ANALYSIS**

AIR-DRIED BASIS

CUMULATIVE WEIGHT % SIZE: +12.5mm						
S.G	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.35	2.6	2.6	7.18	6.07	6503	0.0
S1.35 - F1.40	20.1	22.7	7.20	10.43	6232	0.0
S1.40 - F1.45	15.5	38.2	7.11	12.07	6090	0.0
S1.45 - F1.50	12.5	50.7	7.01	13.88	5943	0.0
S1.50 - F1.55	4.2	54.9	6.95	14.57	5885	0.0
S1.55 - F1.60	3.6	58.6	6.87	15.59	5807	0.0
S1.60 - F1.70	1.8	60.4	6.80	16.12	5759	-
S1.70 - F1.80	12.5	72.9	6.37	19.20	5355	-
S1.80 - F1.90	15.9	88.8	5.89	21.89	4920	-
S1.90 - F2.00	0.4	89.2	5.88	21.96	4911	-
S2.00	10.8	100.0	5.45	24.70	4531	-

D4371  
 D3172  
 D4239  
 D720

CUMULATIVE WEIGHT % SIZE: 12.5mm x 1.0mm						
S.G	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	1.4	1.4	6.83	3.53	6832	0.0
S1.30 - F1.35	21.5	22.9	6.96	4.91	6574	0.0
S1.35 - F1.40	25.5	48.4	6.64	7.39	6403	0.0
S1.40 - F1.45	16.5	64.9	6.49	9.16	6282	0.0
S1.45 - F1.50	7.6	72.5	6.43	10.20	6205	0.0
S1.50 - F1.55	5.4	77.9	6.37	11.17	6130	0.0
S1.55 - F1.60	3.7	81.6	6.32	12.03	6065	0.0
S1.60 - F1.70	5.2	86.7	6.23	13.51	5949	-
S1.70 - F1.80	5.0	91.7	6.13	15.11	5814	-
S1.80 - F1.90	2.7	94.4	6.07	16.08	5728	-
S1.90 - F2.00	1.9	96.3	6.03	16.89	5658	-
S2.00	3.7	100.0	5.92	18.79	5484	-

CUMULATIVE WEIGHT % SIZE: 1mm x 0.15mm						
S.G	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	0.7	0.7	6.15	3.05	7002	0.0
S1.30 - F1.35	26.2	26.9	7.20	3.73	6599	0.0
S1.35 - F1.40	18.7	45.7	7.05	5.47	6471	0.0
S1.40 - F1.45	9.0	54.7	6.95	6.64	6387	0.0
S1.45 - F1.50	5.8	60.5	6.89	7.55	6318	0.0
S1.50 - F1.55	5.0	65.6	6.84	8.48	6246	0.0
S1.55 - F1.60	2.7	68.3	6.82	9.18	6191	0.0
S1.60 - F1.70	4.5	72.8	6.76	10.68	6071	-
S1.70 - F1.80	3.9	76.7	6.71	12.26	5943	-
S1.80 - F1.90	2.7	79.5	6.66	13.53	5842	-
S1.90 - F2.00	2.6	82.0	6.62	14.88	5733	-
S2.00	18.0	100.0	6.25	25.53	4786	-

**FROTH FLOTATION**

CUMULATIVE WEIGHT % SIZE 0.15mm x 0.038mm						
TIME	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
15 SEC (P2)	8.7	8.7	5.71	8.39	6768	0.0
30 SEC (P3)	2.4	11.1	-	8.71	6691	0.0
60 SEC (P4)	1.3	12.3	-	9.08	-	0.0
90 SEC (P5)	1.2	13.5	-	9.44	-	0.0
Tails (T2)	2.3	15.8	-	14.07	-	0.0
Tails (T1)	84.2	100.0	-	47.12	-	0.0

**FINES**

CUMULATIVE WEIGHT % SIZE: -0.038mm		
Mois %	Ash %	CV (kcal/kg)
7.41	68.38	1287

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Bratt Warden  
 Laboratory Manager

Robb Trend Project

Coal Sample Results – 2012 Core Program

RT-11-737C

Mynheer Seam

Sample Horizon: 67.82 to 72.05



CERTIFICATE OF ANALYSIS

Preliminary Report 31-Jul-12  
Final Report

Coal Valley Resources Inc.  
1600 Oxford Tower  
10235-101 Street  
Edmonton, AB  
T5J 3G1, Canada

WORKORDER: RC12021990

Hole: RT-11-737C  
Seam: Mynheer  
Diameter: 63.5mm  
Depth: 67.82m to 72.05m  
Plies: Lower

Raw Analysis

	Wt (g)	Mois%	Ash%	VM%	F.C.%	S%	CV (kcal/kg)	Cl %	RD
Raw Coal	19240	5.80	30.33	28.74	35.13	0.26	4599	<0.01	1.56

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager





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WORKORDER: RC12021990  
  
Hole: RT-11-737C  
Seam: Mynheer  
Diameter: 63.5mm  
Depth: 67.82m to 72.05m  
Plies: Lower

DRY SIZING

Size (mm)	Weight (g)	Weight %	Cum.Weight %
+0.15	13819	95.7	95.7
-0.15	616	4.3	100.0

ASTM Standard  
of Analysis

D4749  
(split with RSD)

\*All losses allocated to -0.15mm fraction

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
Laboratory Manager



**CERTIFICATE OF ANALYSIS**

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 T5J 3G1, Canada

WORKORDER: RC12021990  
 Hole: RT-11-737C  
 Seam: Mynheer  
 Diameter: 63.5mm  
 Depth: 67.82m to 72.05m  
 Plies: Lower

**ANALYSIS**

ASTM Standard  
of Analysis

**FLOAT SINK ANALYSIS**

**AIR-DRIED BASIS**

SIZE: +0.15mm						
S.G.	WT(g)	WT%	Mois %	Ash %	GCV (kcal/kg)	FSI
F1.30	320	2.3	7.54	3.68	6777	0.0
S1.30 - F1.35	3776	27.4	7.37	6.43	6503	0.0
S1.35 - F1.40	2714	19.7	7.01	11.35	6156	0.0
S1.40 - F1.45	1437	10.4	5.56	16.48	5769	0.0
S1.45 - F1.50	690	5.0	5.25	20.80	5471	0.0
S1.50 - F1.55	486	3.5	4.82	25.32	5129	0.0
S1.55 - F1.60	397	2.9	4.44	30.74	4719	0.0
S1.60 - F1.70	407	3.0	4.32	36.54	4227	*
S1.70 - F1.80	375	2.7	3.87	46.55	3460	*
S1.80 - F1.90	337	2.4	4.08	54.71	2675	*
S1.90 - F2.00	430	3.1	4.75	63.40	1669	*
S2.00	2406	17.5	3.70	76.81	544	*

D4371  
 D3172  
 D4239  
 D720

**FINES**

SIZE: -0.15mm			
Mois %	Ash %	GCV (kcal/kg)	FSI
6.83	59.86	1824	0.0

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager



CERTIFICATE OF ANALYSIS

Preliminary Report  
 Final Report

31-Jul-12

Coal Valley Resources Inc.  
 1600 Oxford Tower  
 10235-101 Street  
 Edmonton, AB  
 T5J 3G1, Canada

WORKORDER: RC12021990  
 Hole: RT-11-737C  
 Seam: Mynheer  
 Diameter: 63.5mm  
 Depth: 67.82m to 72.05m  
 Plies: Lower

ANALYSIS

ASTM Standard  
of Analysis

FLOAT SINK ANALYSIS

AIR-DRIED BASIS

CUMULATIVE WEIGHT % SIZE: +0.15mm						
S.G.	WT%	CUM WT%	Mois %	Ash %	CV (kcal/kg)	FSI
F1.30	2.3	2.3	7.54	3.68	6777	0.0
S1.30 - F1.35	27.4	29.7	7.38	6.22	6524	0.0
S1.35 - F1.40	19.7	49.4	7.23	8.26	6377	0.0
S1.40 - F1.45	10.4	59.9	6.94	9.69	6271	0.0
S1.45 - F1.50	5.0	64.9	6.81	10.55	6210	0.0
S1.50 - F1.55	3.5	68.4	6.71	11.31	6154	0.0
S1.55 - F1.60	2.9	71.3	6.62	12.10	6096	0.0
S1.60 - F1.70	3.0	74.2	6.53	13.07	6021	-
S1.70 - F1.80	2.7	77.0	6.43	14.26	5931	-
S1.80 - F1.90	2.4	79.4	6.36	15.50	5831	-
S1.90 - F2.00	3.1	82.5	6.30	17.31	5673	-
S2.00	17.5	100.0	5.84	27.70	4777	-

D4371  
 D3172  
 D4239  
 D720

FINES

CUMULATIVE WEIGHT % SIZE: -0.15mm			
Mois %	Ash %	CV (kcal/kg)	FSI
6.83	59.86	1824	0.0

We certify the analysis reported hereon was determined in accordance with the applicable ASTM Standard Methods of analysis of Coal.

<original signed by>

Brett Warden  
 Laboratory Manager

**Appendix 49**

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Dump Foundation: Site Characteristics, MDH Program –

Oct/Nov 2012

## **Appendix 49**

### **Robb Trend Project**

#### **Dump Foundation – Site Characterization**

**MDH Program – Oct/Nov 2012**

##### **Proposed Program**

CVRI has proposed a field campaign to characterize dump foundation conditions within the initial Robb Trend mining area. The objective is to obtain a regionalized description of surficial materials that may form foundations of waste dumps. The program should test the level of variation across the region and provide a comparison to conditions found in the existing CVM.

The program will require:

- Obtaining a Temporary Field Approval (TFA) from ESRD
- Flagging of sites and necessary slashing for access
- Completing backhoe test pits and ‘logging’ the pits
- Obtaining appropriate material samples for laboratory testing
- Providing a summary of results

CVRI proposed a series of 46 test pits with focus on potential dumps associated with Val d’Or and Mynheer dump locations. The attached figure illustrates the test pit locations proposed.

##### **Test Pits Completed**

MDH has reported that 41 test pits were completed in the field. Pits 21, 22, 23, 24 and 26 could not be accessed due to wet conditions.

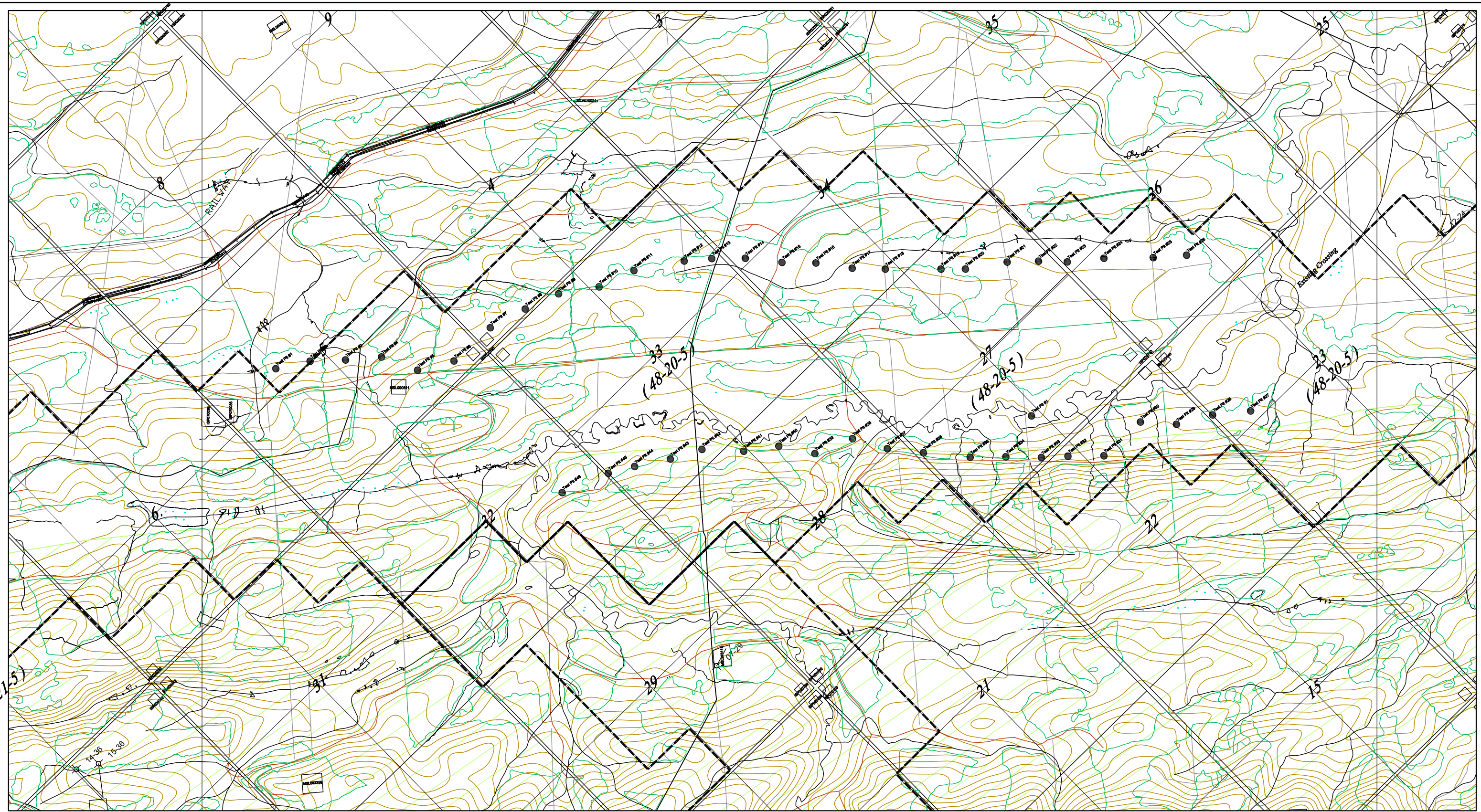
MDH has taken a total of 182 grab samples including 39 ‘topsoil’ samples. Also, 16 shelly tube samples were collected.



No testing is proposed on the topsoil samples.

All grab samples will be subject to atterburg and water content testing. Size distribution will be

determined for 8 of the grab samples. All 16 shelby tube samples will be received a UCS test. Only 5 are proposed for a direct shear test.





**Legend**  
 Proposed Robb Trend Mine Permit Boundary  
 Proposed Geotech Test Pit

0 0.25 0.5 1km  
 Scale 1 : 25 000

PROJECT: <b>Coal Valley Mine Robb Trend Project</b>		 <small>... Final Docs\SIR\ERCB\Fig 49-1 Geotech.dwg</small>
TITLE: <b>Dump Geotech Map</b>		
<small>DRAWN: JG          CHECKED: KP          DATE: Dec 6/12          PROJECT: 08-041</small>	<small>FIGURE:  <b>49-1</b></small>	

Source: CVRI, 2012.

## **Appendix 64**

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### **Existing and Expired Water Diversion Licenses**

Document #	Project Name	Permit Holder	Approval Date	Expiry date	Notes	Location
00021005-00-00	CENTRAL FOOTHILLS GAS GATHERING SYSTEM PIPELINE PROJECT	ANG Gathering & Processing Ltd	14-Jan-98	14-Jan-03		049-20-5
00212753-00-00	ROBB TREND 2004/05 EXPLORATION PROGRAM	Coal Valley Resources Inc	01-Oct-04	Never		049-20-5, 048-20-5, 048-19-5, 047-19-5, 047-18-5, 046-18-5
00212753-00-01	ROBB TREND 2004/05 EXPLORATION PROGRAM - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		049-20-5, 048-20-5, 048-19-5, 047-19-5, 047-18-5, 046-18-5
00306665-00-00					Notice 00306665-00-00 under the provisions of the Water Act, Code of Practice for Pipelines and Telecommunication Lines Crossing a Water Body at NE 13-49-20-W5 * affecting the Surface Runoff was received from Peyto Exploration & Development Corp. on Feb. 27, 2012.	049-20-5
00017125-02-00	HANLAN-ROBB SOUR GAS PLANT	Suncor Energy Inc	28-Feb-07	31-Oct-16		049-20-5
00017125-02-01	HANLAN-ROBB SOUR GAS PLANT - DEVELOPMENT OF SECOND SOUR B	Suncor Energy Inc	06-Aug-09	31-Oct-16		049-20-5
00017125-02-02	HANLAN-ROBB SOUR GAS PLANT - UPDATED SOIL CLAUSES	Suncor Energy Inc	23-May-12	31-Oct-16		049-20-5
00035887-00-00	ROBB/INDUSTRIAL/PETRO-CANADA F14456	Suncor Energy Inc	25-Jul-89	Never	Water Resources Act	049-20-5
00035887-00-01	ROBB/INDUSTRIAL/PETRO-CANADA F14457	Suncor Energy Inc	26-Jan-04	Never	Water Resources Act	049-20-5
00035887-00-02	ROBB/GAS PLANT/SUNCOR ENERGY INC. - F14456	Suncor Energy Inc	30-Jul-10	Never	Water Resources Act	049-20-5
00300826-00-00					Notice 00300826-00-00 under the provisions of the Water Act, Code of Practice for Pipelines and Telecommunication Lines Crossing a Water Body at NE 4-49-20-W5 affecting the Surface Runoff was received from Tourmaline Energy Corp. on Oct. 31, 2011.	049-20-5
00011066-02-00	COAL VALLEY COAL MINE - INCLUDE MERCOAL WEST PROJECT	Coal Valley Resources Inc	10-Nov-10	09-Nov-20		049-21-5, 048-20-5, 047-19-5
00011066-02-01	COAL VALLEY COAL MINE- MINISTERIAL ORDER 09/2011	Coal Valley Resources Inc	07-Mar-11	09-Nov-20		049-21-5, 048-20-5, 047-19-5
00011066-02-02	COAL VALLEY COAL MINE- PITS 152 AND 162 (YELLOWHEAD TOWER)	Coal Valley Resources Inc	14-Oct-11	09-Nov-20		049-21-5, 048-20-5, 047-19-5
00142646-00-00	WEST EXTENSION EXPLORATION PROJECT	Coal Valley Resources Inc	27-Nov-00	Never		049-21-5, 048-20-5
00142646-00-01	WEST EXTENSION EXPLORATION PROJECT - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		049-21-5, 048-20-5
00148229-00-00	WEST EXTENSION EXPLORATION PROJECT - ADDITIONAL HOLES	Coal Valley Resources Inc	29-Mar-01	Never		049-21-5, 048-20-5
00148229-00-01	WEST EXTENSION EXPLORATION PROJECT - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		049-21-5, 048-20-5
00155691-00-00	COAL VALLEY - WEST EXTENSION 2001/02 EXPLORATION PROJECT	Coal Valley Resources Inc	23-Oct-01	Never		049-21-5, 048-20-5
00155691-00-01	COAL VALLEY - WEST EXTENSION 2001/02 EXPLORATION PROJECT - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		049-21-5, 048-20-5
00155695-00-00	COAL VALLEY - MERCOAL 2001/02 EXPLORATION PROJECT	Coal Valley Resources Inc	23-Oct-01	Never		049-21-5, 048-20-5
00155695-00-01	COAL VALLEY - MERCOAL 2001/02 EXPLORATION PROJECT - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		049-21-5, 048-20-5
00186703-00-00	YELLOWHEAD TOWER 2002-03 EXPLORATION PROJECT	Coal Valley Resources Inc	28-Jun-02	Never		049-21-5, 048-20-5
00186703-00-01	YELLOWHEAD TOWER 2002-03 EXPLORATION PROJECT - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		049-21-5, 048-20-5
00211265-00-00	MERCOAL WEST PHASE 1 2004/2005 EXPLORATION PROGRAM	Coal Valley Resources Inc	19-Aug-04	Never		049-21-5, 048-20-5
00211265-00-01	MERCOAL WEST PHASE 1 2004/2005 EXPLORATION PROGRAM - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		049-21-5, 048-20-5



Document #	Project Name	Permit Holder	Approval Date	Expiry date	Notes	Location
00222772-00-00	A PORTION OF A COAL MINE HELD UNDER D&R APPROVAL C-4-76	Coal Valley Resources Inc	14-Aug-89	Never		049-21-5, 048-20-5, 047-19-5
00222774-00-00	A PORTION OF A COAL MINE HELD UNDER D&R APPROVAL C-4-77	Coal Valley Resources Inc	18-Jul-96	Never		049-21-5, 048-20-5, 047-19-5
00222775-00-00	A PORTION OF A COAL MINE HELD UNDER D&R APPROVAL C-4-78	Coal Valley Resources Inc	15-Oct-90	Never		049-21-5, 048-20-5, 047-19-5
00239879-00-00	FELTON CREEK 2007/08 CORE HOLE PROGRAM	Coal Valley Resources Inc	13-Jun-07	Never		049-21-5, 048-20-5
00285848-00-00	ROBB/CONSTRUCTION/COAL VALLEY RESOURCES INC - F00285848	Coal Valley Resources Inc	12-Oct-11	09-Nov-20		049-21-5, 048-20-5
00023315-00-00	GULF CANADA RESOURCES INC, WR, 43369	ConocoPhillips Canada Resources Corp	25-Aug-83	Never	Water Resources Act	049-21-5
00117878-00-00	IMPERIAL-COALSPUR NO.1 WELL	Imperial Oil Resources Limited	08-Feb-69	Never		049-21-5
00117906-00-00	NORTHWEST CO. 2 WELL	Northwest Co Ltd,	15-Feb-69	Never		049-21-5
00117907-00-00	NORTHWEST CO. 1 WELL	Northwest Co Ltd,	15-Feb-69	Never		049-21-5
00163704-00-00	CROWN LAND/REGISTRATION/ASRD - ROBB HORSE GRAZING ASSOCIATIO	Public Land Management	29-May-09	Never	Water Resources Act	049-21-5
00048066-00-00	ROBB/WMF/TRANSFER STATION	West Yellowhead Regional Waste Management Authority	01-Sep-96	Never		049-21-5
00001107-02-00	ROBB WASTEWATER LAGOON	Yellowhead County	01-Aug-05	Never		049-21-5
00186193-00-00	ROBB/MUNICIPAL - SANITARY MAIN EXTENSION, MOTEL	Yellowhead County			This Authorization is currently Issued.	049-21-5
00189233-00-00	ROBB/MUNICIPAL - 2002 BIOSOLIDS TO LAND PROGRAM	Yellowhead County			This Authorization is currently Issued.	049-21-5
00022703-00-00	CHAMPION FOREST PRODUCTS LTD, WR, 46128	Champion Forest Products Ltd.	17-Jun-88	Never	Water Resources Act	048-19-5
00010748-00-00	LOVETT RIVER TO PECO GAS PLANT PIPELINE SYSTEM	ConocoPhillips Canada Resources Corp	01-Sep-93	Never		048-19-5
00010748-00-01	LOVETT RIVER TO PECO GAS PLANT PIPELINE SYSTEM	ConocoPhillips Canada Resources Corp	03-May-96	Never		048-19-5
00309034-00-00	COAL VALLEY/HYDROFRACKING/ENERPLUS CORPORATION - F00309034	Enerplus Corp	13-Apr-12	13-May-12	Water Resources Act	048-19-5
00098174-00-00	AN ACCESS ROAD IN SEC 7, 8-48-20 W5M	BP Canada Energy Company	19-Feb-71	Never		048-20-5
00020387-01-00	FOOTHILLS/YELLOWHEAD EXPLORATION	Coal Valley Resources Inc	10-Dec-96	Never		048-20-5
00020387-01-01	FOOTHILLS/YELLOWHEAD EXPLORATION - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		048-20-5
00215635-00-00	COAL VALLEY/MINING/LUSCAR LTD. - F00215635	Coal Valley Resources Inc	01-Jun-05	11-Dec-13	Water Resources Act	048-20-5
00215635-00-01	COAL VALLEY/MINING/COAL VALLEY RESOURCES INC. - F00215635	Coal Valley Resources Inc	20-Oct-08	11-Dec-13	Water Resources Act	048-20-5
00010628-00-00	COALBRANCH PIPELINE SYSTEM	Suncor Energy Inc	01-Sep-93	Never		048-20-5
00128226-00-00	B.A. ET AL COALBRANCH 6-18-48-20 WELL	The British American Oil Company Limited	10-Jan-69	Never		048-20-5
00300156-00-00					Notice 00300156-00-00 under the provisions of the Water Act, Code of Practice for Pipelines and Telecommunication Lines Crossing a Water Body at NE 9-48-20-W5 * affecting the Drainage Ditch was received from Tourmaline Energy Corp. on Nov. 03, 2011.	048-20-5
00028039-00-00	LUSCAR STERCO (1977) LTD, WR, 23409	Coal Valley Resources Inc	15-Nov-95		Water Resources Act	047-19-5
00028039-00-01	FOOTHILLS/RE FOOTHILLS/REALIGNMENT/ COAL VALLEY RESOURCES INC - F23409	Coal Valley Resources Inc	06-Nov-08	Never		047-19-5
00029765-00-00	LUSCAR STERCO (1977) LTD, WR, 21661	Coal Valley Resources Inc	16-Sep-85	01-Jan-19		047-19-5

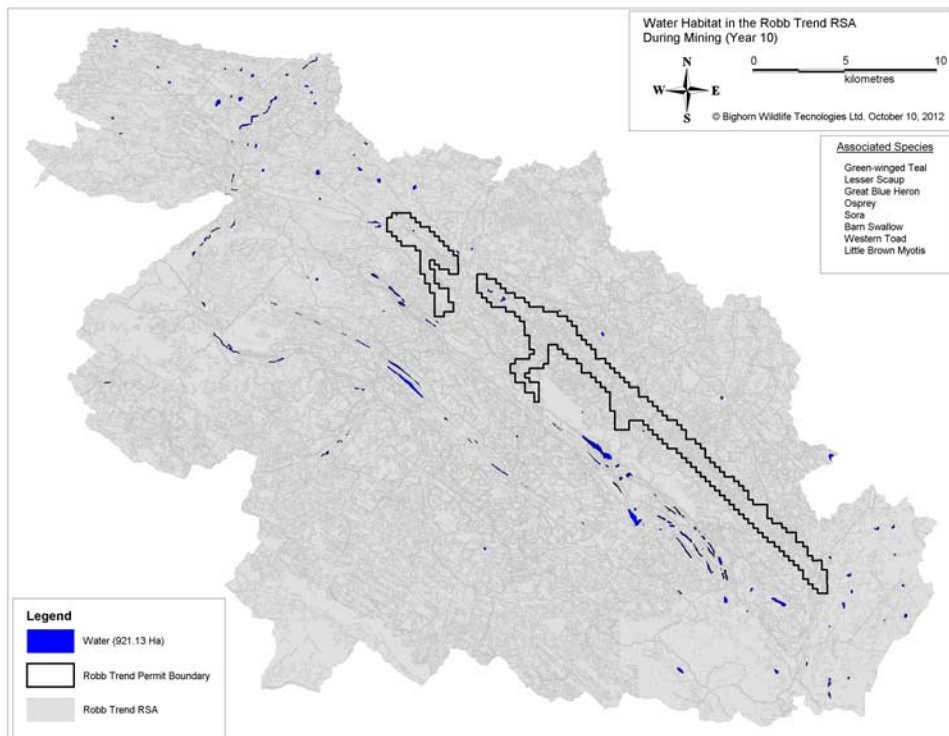
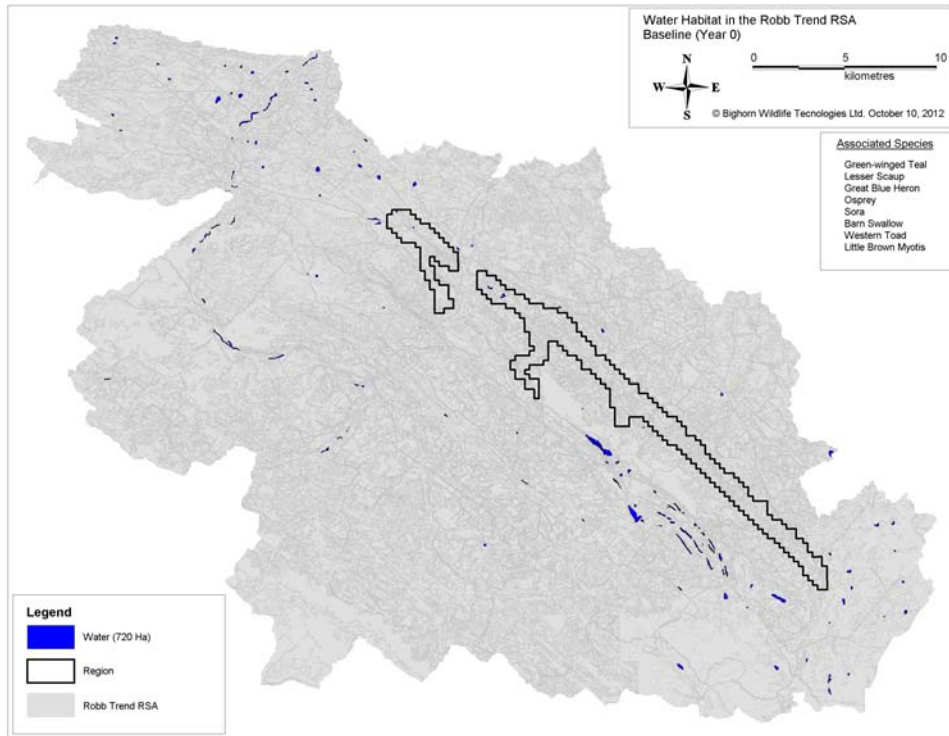
Document #	Project Name	Permit Holder	Approval Date	Expiry date	Notes	Location
00029765-00-01	FOOTHILLS/FLOOD CONTROL/COAL VALLEY RESOURCES INC. - F21661	Coal Valley Resources Inc	28-Nov-08	01-Jan-19		047-19-5
00031124-00-00	FOOTHILLS/FLOOD CONTROL/LUSCAR LTD - F20264	Coal Valley Resources Inc	29-Jan-85	Never	Water Resources Act	047-19-5
00031124-00-01	FOOTHILLS/FLOOD CONTROL/LUSCAR LTD - F20264	Coal Valley Resources Inc	07-Nov-08	Never	Water Resources Act	047-19-5
00031221-00-00	LUSCAR STERCO (1977) LTD, WR, 20165	Coal Valley Resources Inc	20-Oct-86	01-Jan-19	Water Resources Act	047-19-5
00031221-00-01	FOOTHILLS/FLOOD CONTROL/COAL VALLEY RESOURCES INC. - F20165	Coal Valley Resources Inc	28-Nov-08	01-Jan-19	Water Resources Act	047-19-5
00031527-00-00	LUSCAR LTD, WR, 19829	Coal Valley Resources Inc	22-Dec-81	Never	Water Resources Act	047-19-5
00031527-00-01	FOOTHILLS/DRAINAGE/COAL VALLEY RESOURCES INC - F19829	Coal Valley Resources Inc	06-Nov-08	Never	Water Resources Act	047-19-5
00033551-00-00	LUSCAR LTD, WR, 17746	Coal Valley Resources Inc	27-Jan-83	Never	Water Resources Act	047-19-5
00033551-00-01	FOOTHILLS/INDUSTRIAL/COAL VALLEY RESOURCES INC - F17746	Coal Valley Resources Inc	07-Nov-08	Never	Water Resources Act	047-19-5
00033552-00-00	LUSCAR LTD, WR, 17746	Coal Valley Resources Inc	27-Jan-83	Never	Water Resources Act	047-19-5
00033552-00-01	FOOTHILLS/INDUSTRIAL/COAL VALLEY RESOURCES INC - F17746	Coal Valley Resources Inc	07-Nov-08	Never	Water Resources Act	047-19-5
00033895-00-00	LUSCAR LTD, WR, 17344	Coal Valley Resources Inc	27-Oct-82	Never	Water Resources Act	047-19-5
00033895-00-01	FOOTHILLS/INDUSTRIAL/COAL VALLEY RESOURCES INC - F17344	Coal Valley Resources Inc	07-Nov-08	Never	Water Resources Act	047-19-5
00034759-00-00	LUSCAR STERCO (1977) LTD, WR, 16228	Coal Valley Resources Inc	22-Aug-85	Never	Water Resources Act	047-19-5
00034759-00-01	FOOTHILLS/FLOOD CONTROL/COAL VALLEY RESOURCES INC - F16228	Coal Valley Resources Inc	06-Nov-08	Never	Water Resources Act	047-19-5
00035867-00-00	LUSCAR STERCO (1977) LTD, WR, 14489	Coal Valley Resources Inc	13-Jan-86	Never	Water Resources Act	047-19-5
00035867-00-01	FOOTHILLS/DRAINAGE/COAL VALLEY RESOURCES INC - F14489	Coal Valley Resources Inc	07-Nov-08	Never	Water Resources Act	047-19-5
00046707-00-00	PIT25D COAL VALLEY EXPLORATION	Coal Valley Resources Inc	03-Jun-97	Never		047-19-5
00046707-00-01	LUSCAR STERCO(1997) LTD. PIT 25S COAL VALLEY -DRILL PROGRAM	Coal Valley Resources Inc	18-Aug-98	Never		047-19-5
00046707-00-02	PIT25D COAL VALLEY EXPLORATION - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		047-19-5
00075727-00-00	BRAZEAU NORTH 1999 EXPLORATION PROGRAM	Coal Valley Resources Inc	16-Aug-99	Never		047-19-5
00075727-00-01	BRAZEAU NORTH 1999 EXPLORATION PROGRAM - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		047-19-5
00185287-00-00	COAL VALLEY RESOURCES PRODUCTION OF ALTERNATE FUEL	Coal Valley Resources Inc	28-May-02	Never		047-19-5
00185287-00-01	EDSON PRODUCTION OF ALTERNATE FUEL - TRANSFER	Coal Valley Resources Inc	31-May-06	Never		047-19-5
00105252-00-00	GULF MOBIL POC LOVETTR 10-19-47-19 WELL	Gulf Canada Limited	12-Sep-78	Never		047-19-5
00222448-00-00	COAL VALLEY/PROCESSING/LUSCAR LTD. - F17747	Prairie Mines & Royalty Ltd	25-May-06	24-May-16	Water Resources Act	047-19-5
00222448-00-01	CADOMIN/PROCESSING/PRAIRIE MINES & ROYALTY LTD. - F17747	Prairie Mines & Royalty Ltd	11-Nov-10	24-May-16	Water Resources Act	047-19-5
00102801-00-00	AN ACCESS ROAD IN TWP 47-19 W5M	Texas Pacific Oil Company Inc	08-Apr-76	Never		047-19-5
00117875-00-00	B.A. ET AL LOVETT RIVER 10-2-47-19 WELL	The British American Oil Company Limited	09-Feb-69	Never		047-19-5
00025605-00-00	ALTA ENVIRONMENTAL PROTECTION, WR, 25742	Alberta Environment and Water	09-Jun-94	Never	Water Resources Act	046-18-5
00205037-00-00	ELK RIVER/WETLANDS/ALBERTA TRANSPORTATION - F00205037	Alberta Transportation - North Central Region	28-May-04	27-May-14	Water Resources Act	046-18-5
00208762-00-00	ELK RIVER/WETLANDS/ALBERTA TRANSPORTATION - F00205037	Alberta Transportation - North Central Region	28-May-04	27-May-14	Water Resources Act	046-18-5

## **Appendix 69**

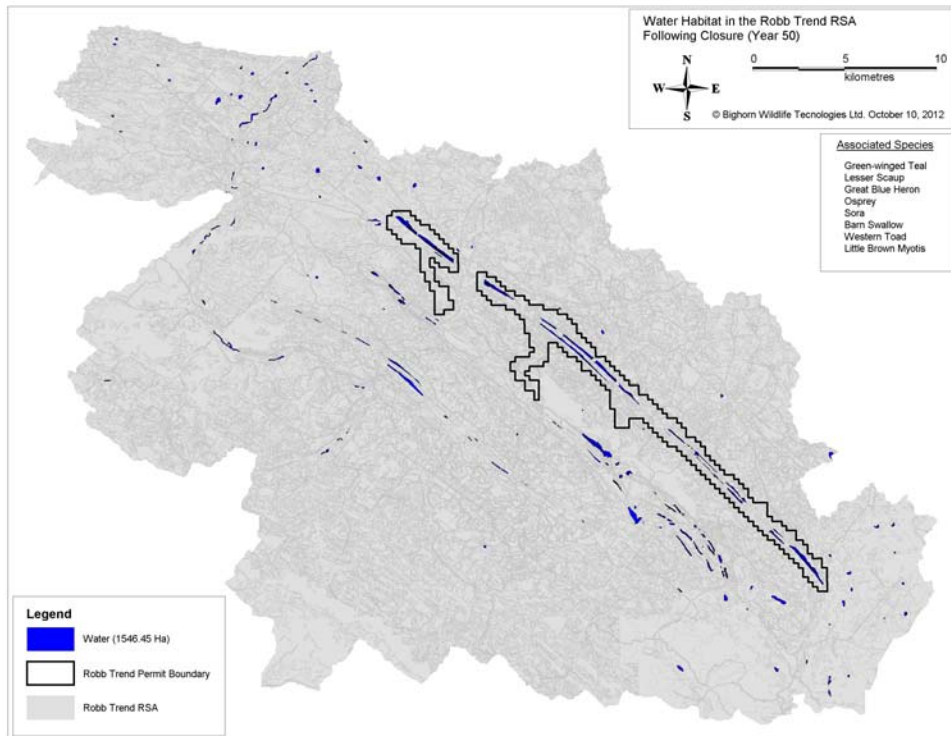
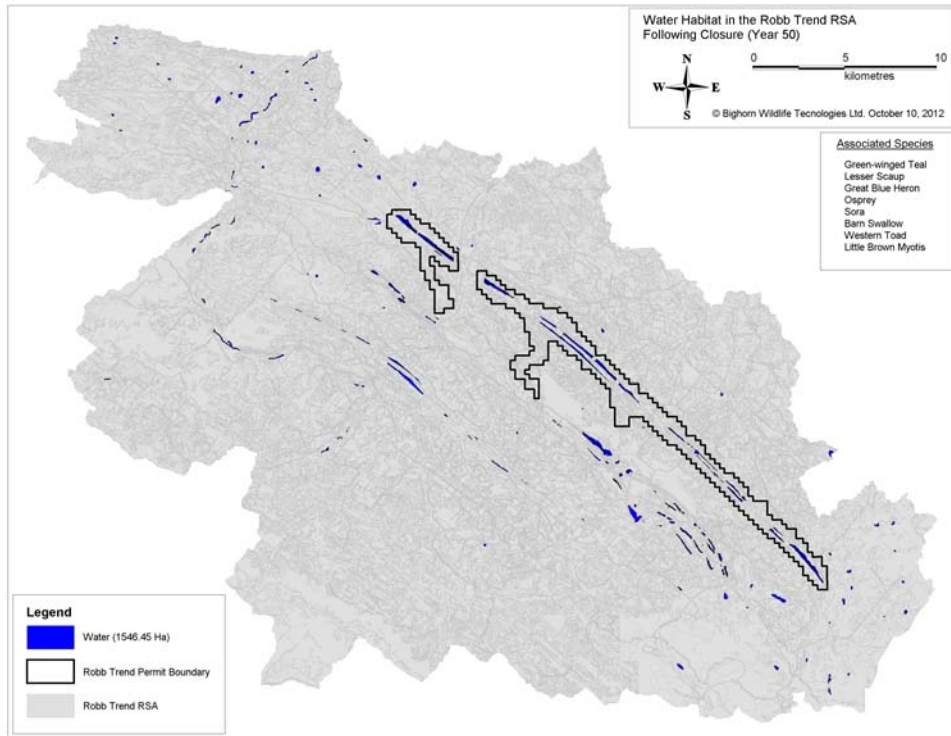
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### **Habitat Maps for Species of Management Concern**

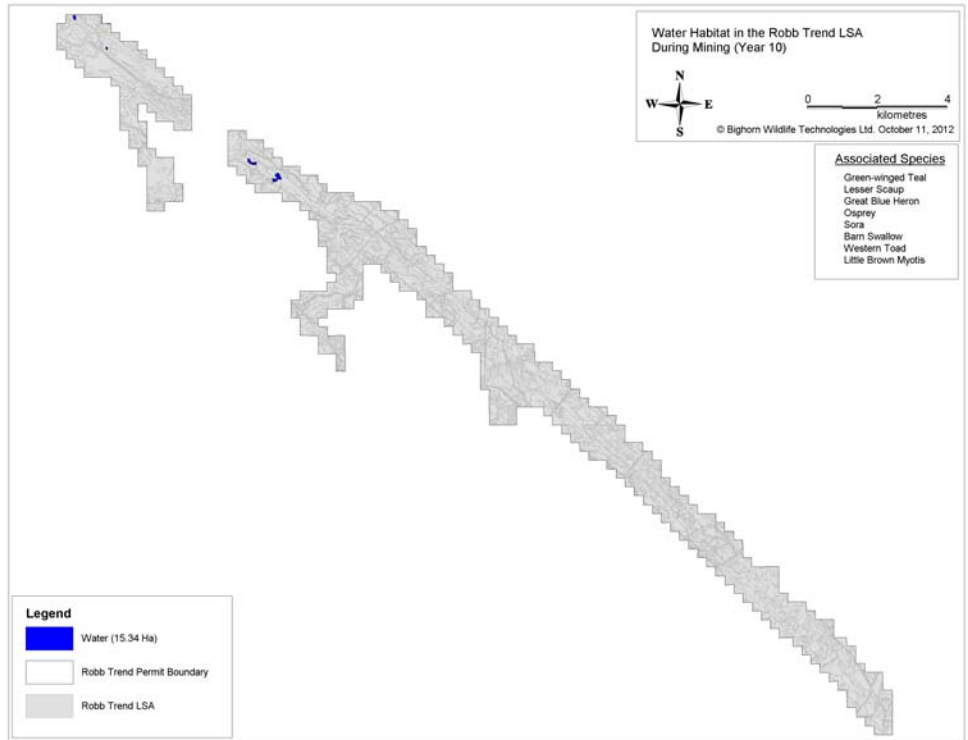
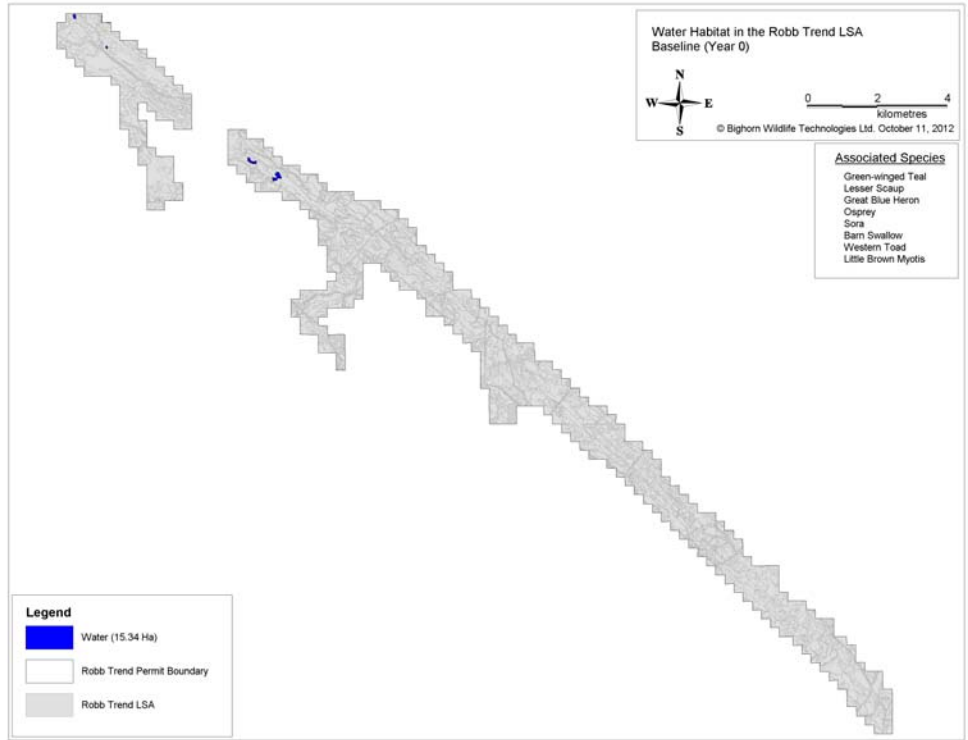




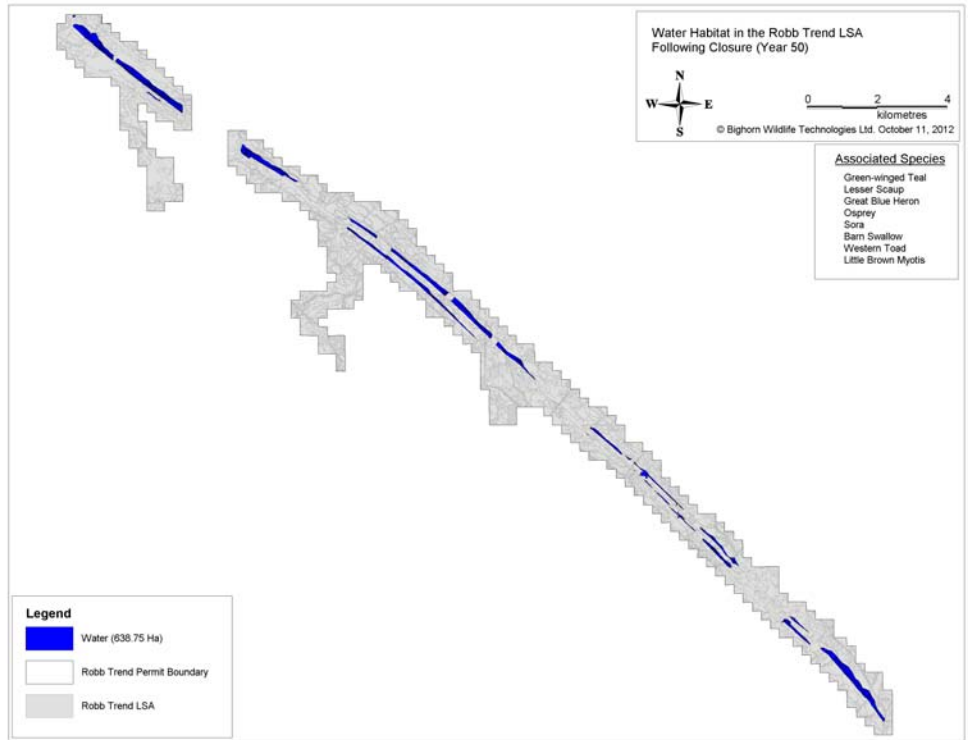
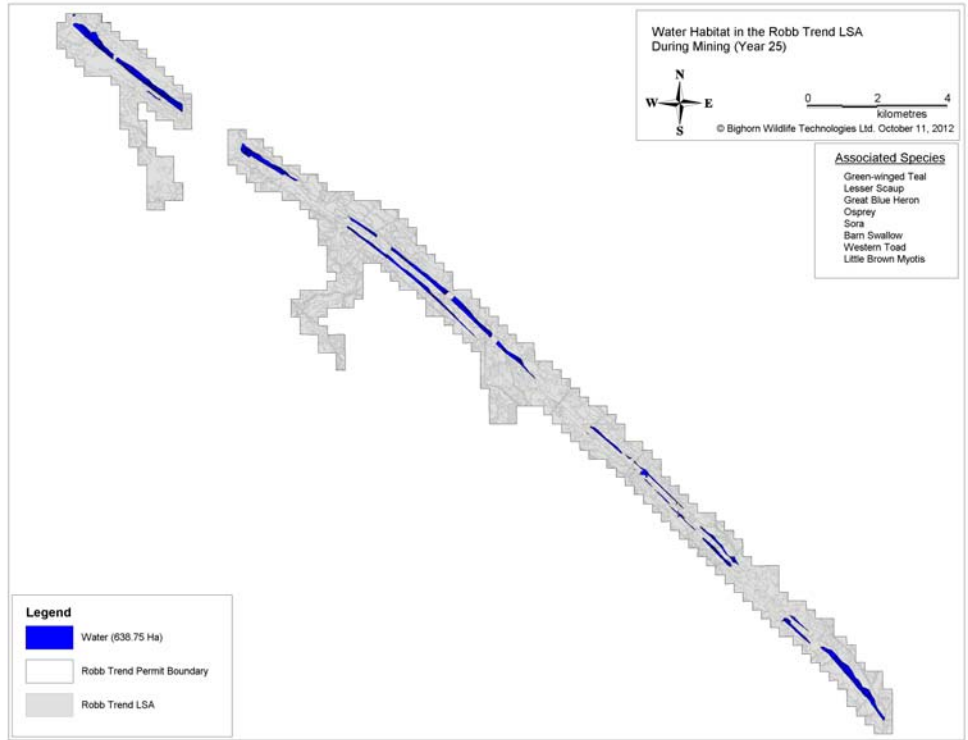
**RT SIR 69 – Maps. Habitat 1. Water, RSA, Year 0 and Year 10**



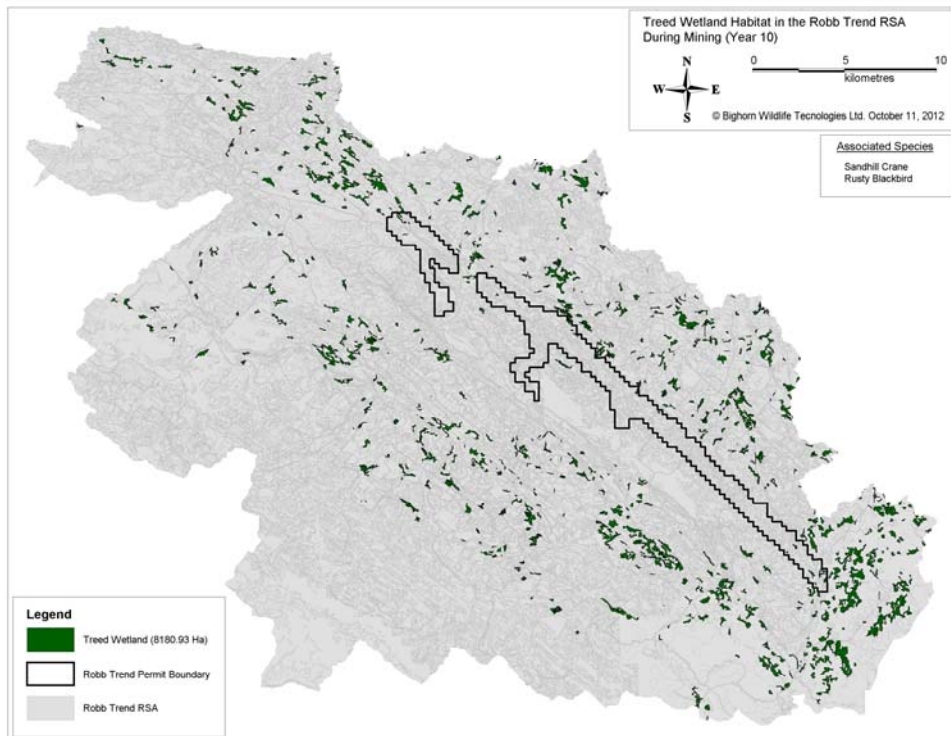
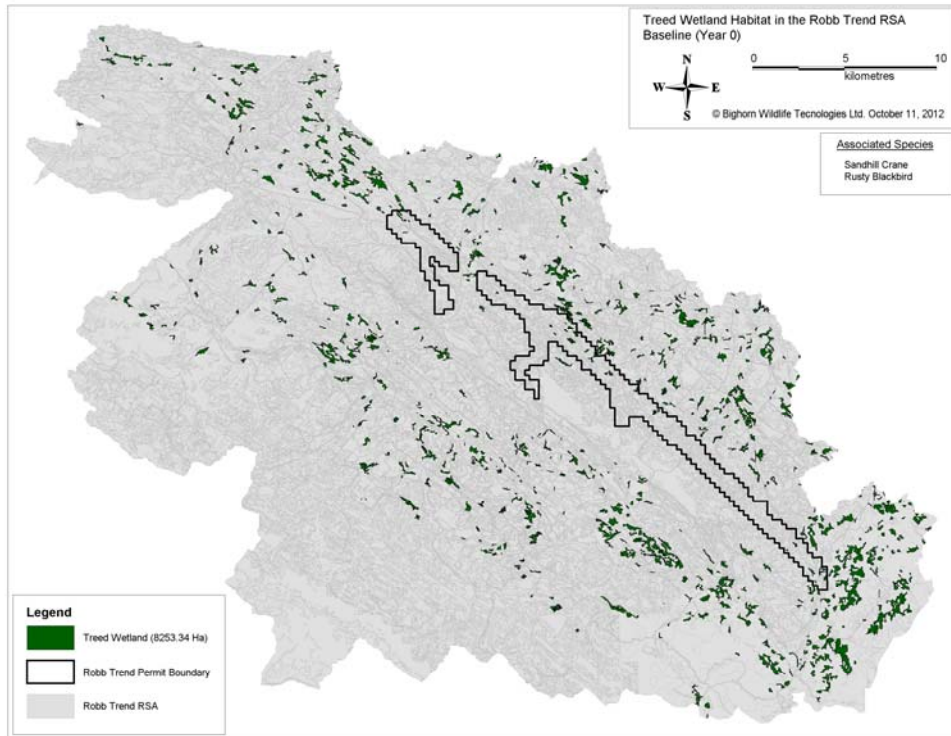
RT SIR 69 – Maps. Habitat 1. Water, RSA, Year 25 and Year 50



**RT SIR 69 – Maps. Habitat 1. Water, LSA, Year 0 and Year 10**

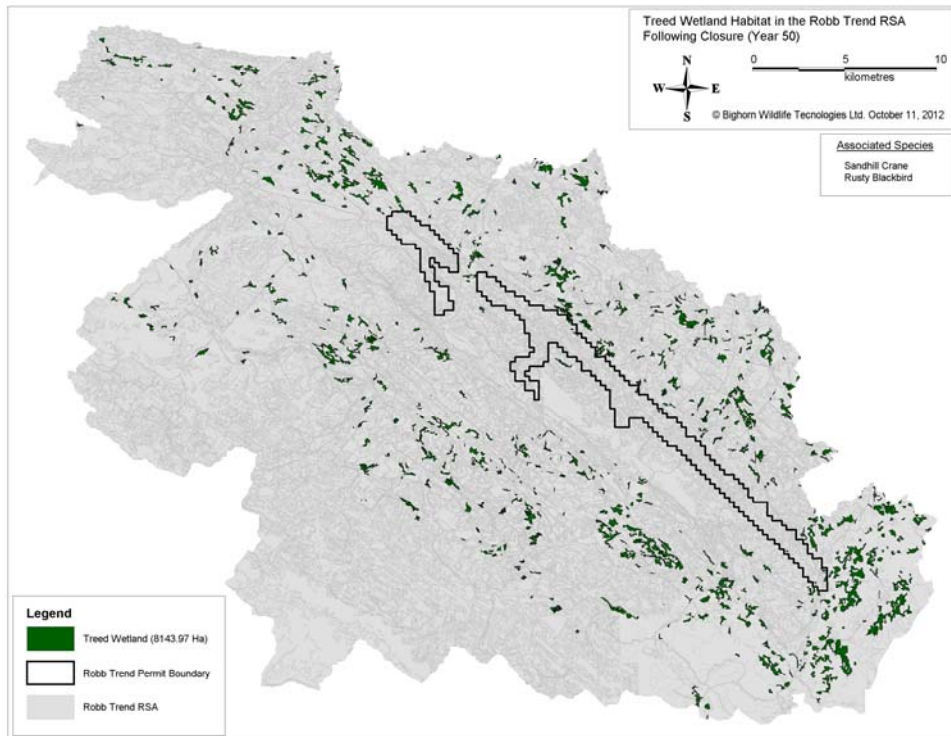
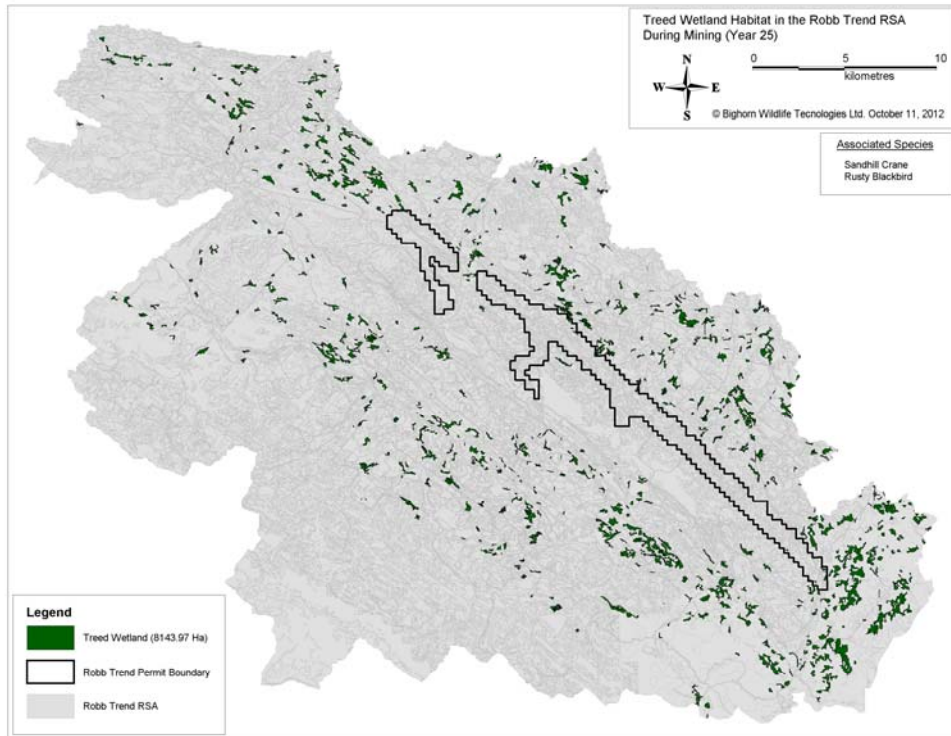


RT SIR 69 – Maps. Habitat 1. Water, LSA, Year 25 and Year 50

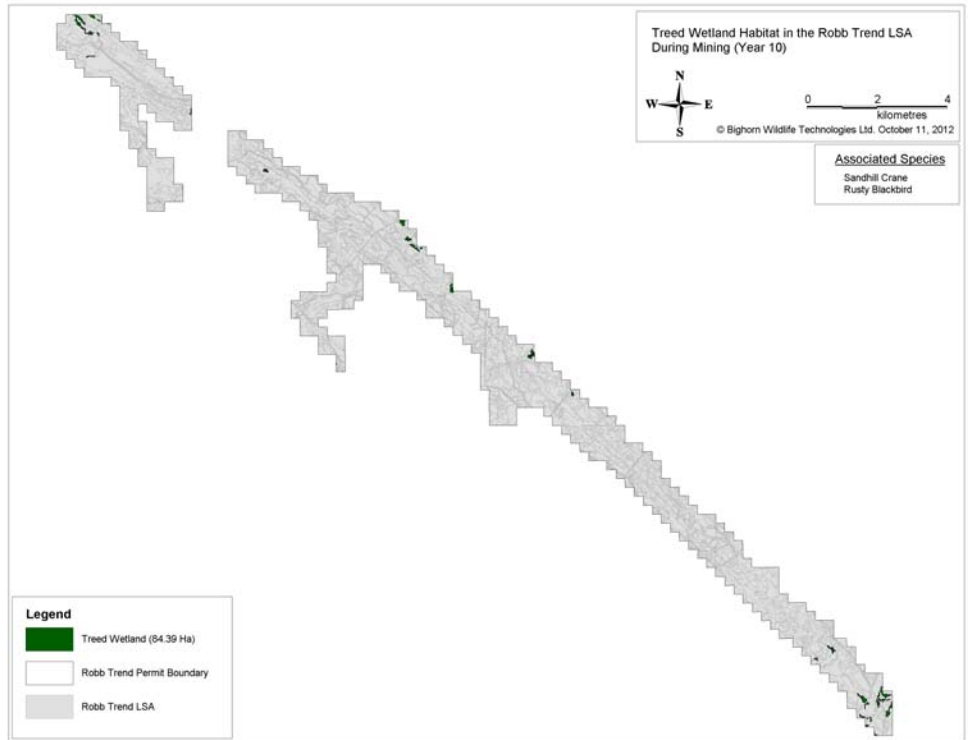
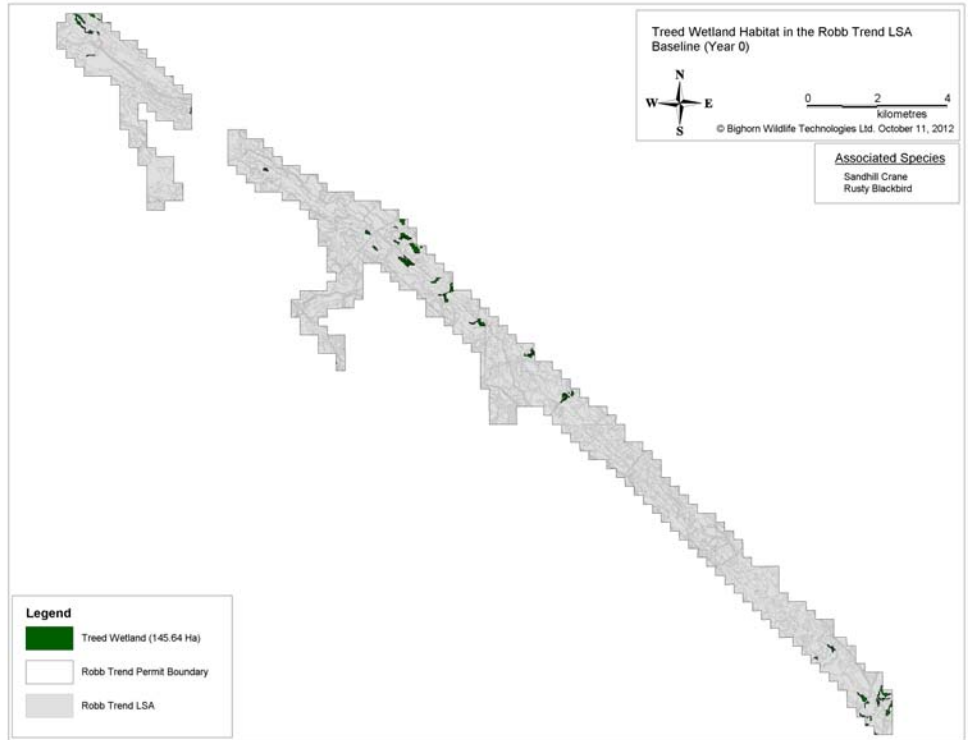


**RT SIR 69 – Maps. Habitat 2. Treed Wetland, RSA, Year 0 and Year 10**



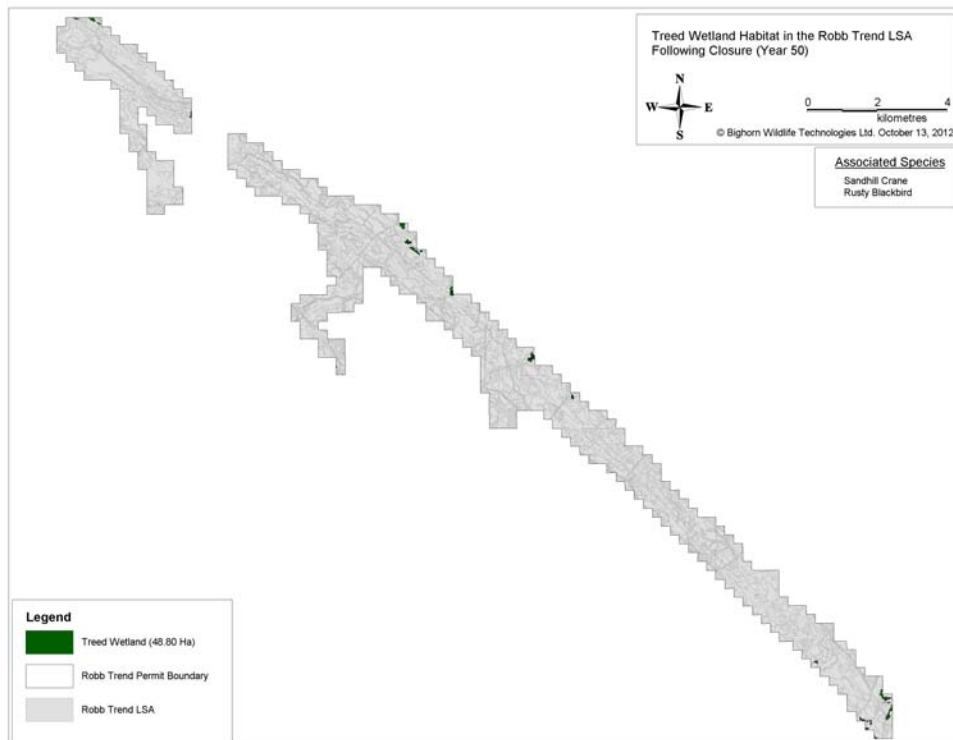
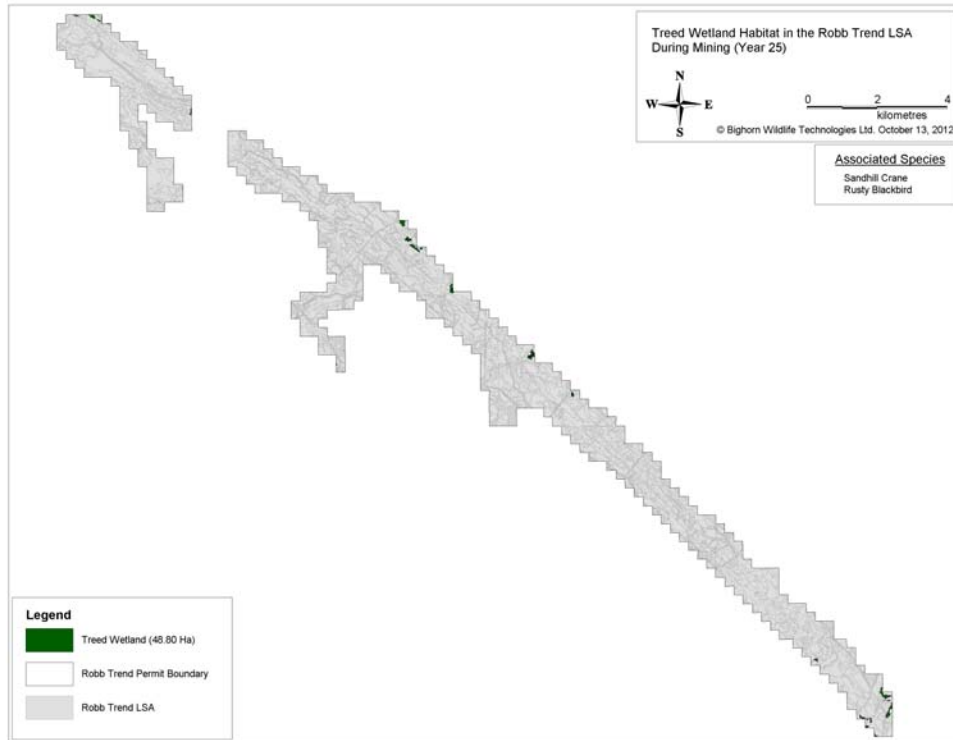


**RT SIR 69 – Maps. Habitat 2. Treed Wetland, RSA, Year 25 and Year 50**

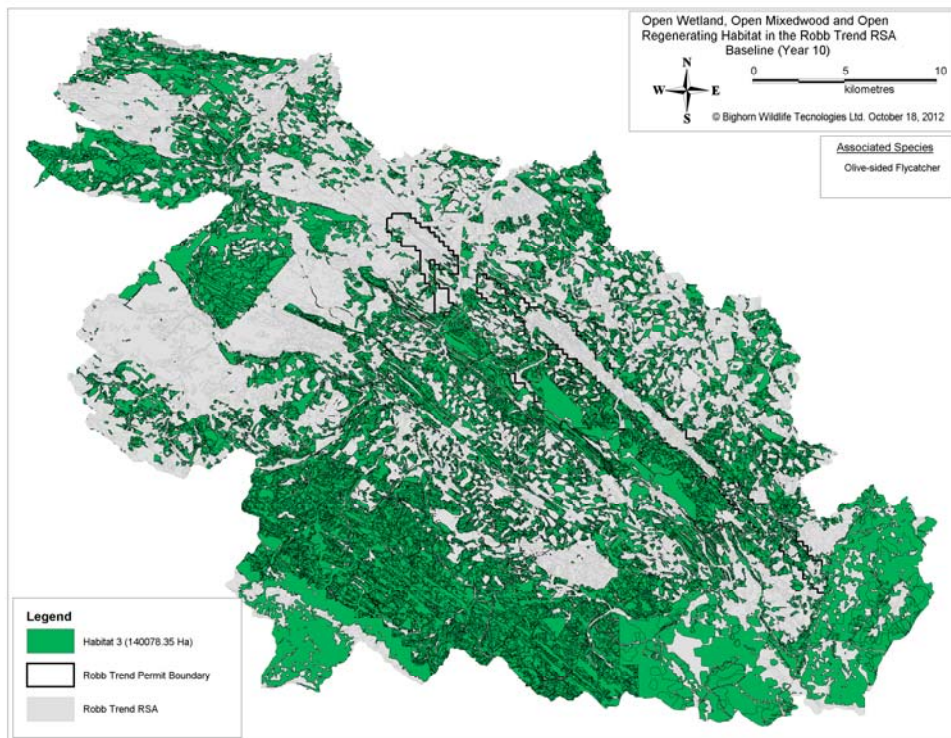
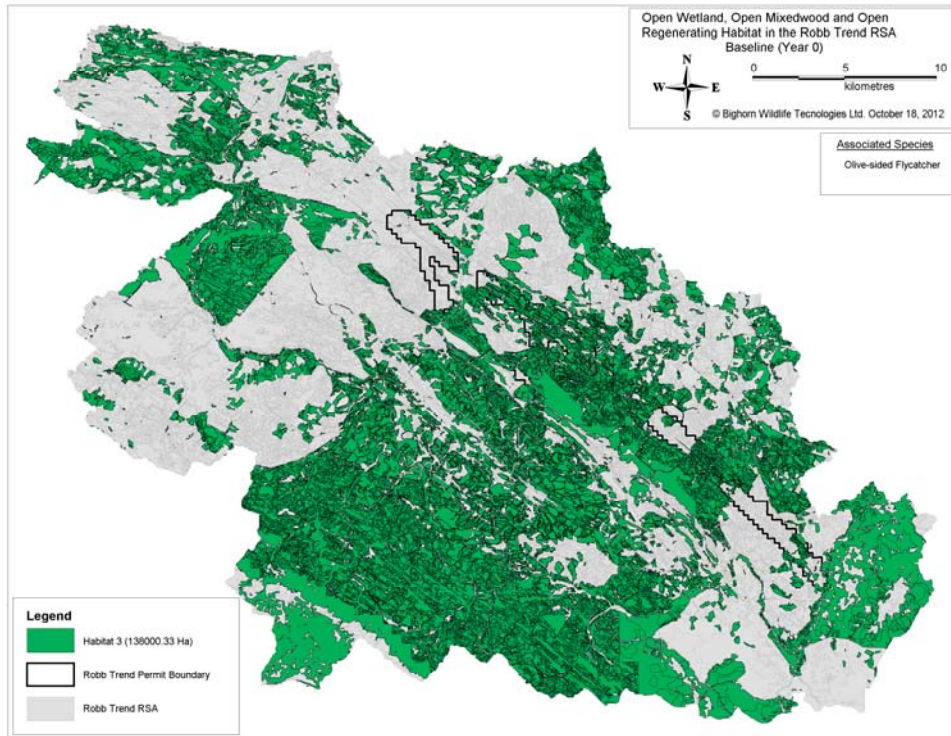


**RT SIR 69 – Maps. Habitat 2. Treed Wetland, LSA, Year 0 and Year 10**

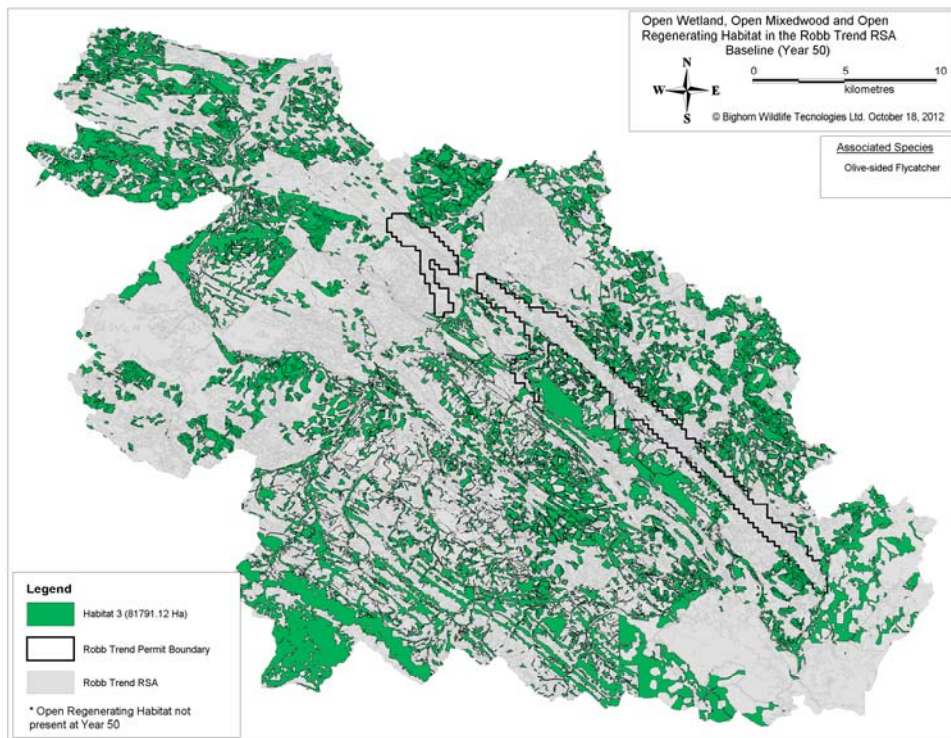
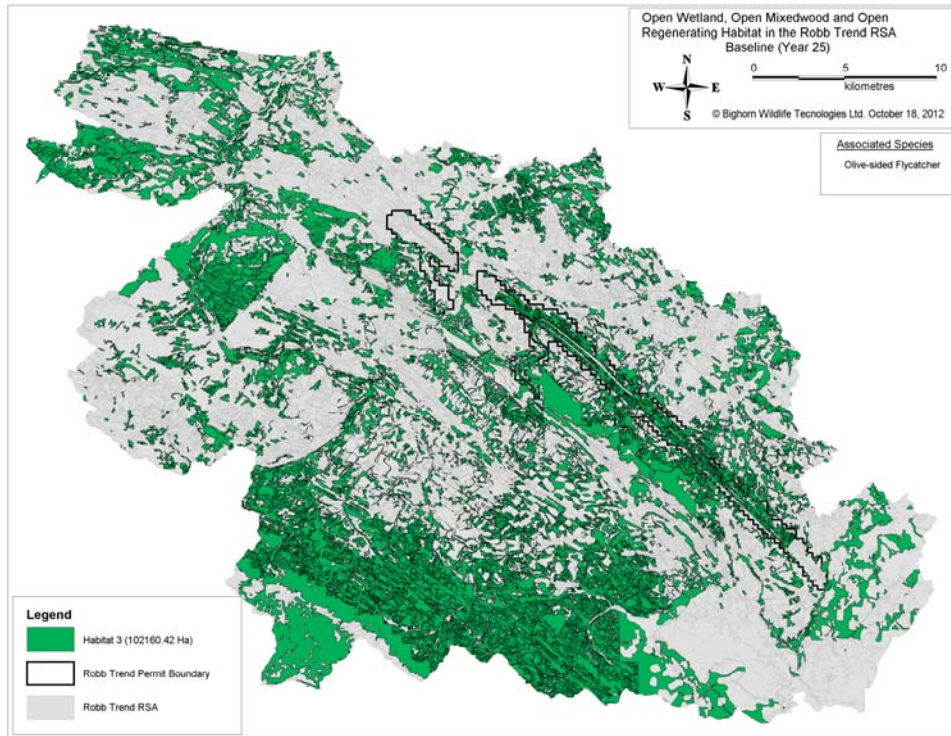




RT SIR 69 – Maps. Habitat 2. Treed Wetland, LSA, Year 25 and Year 50

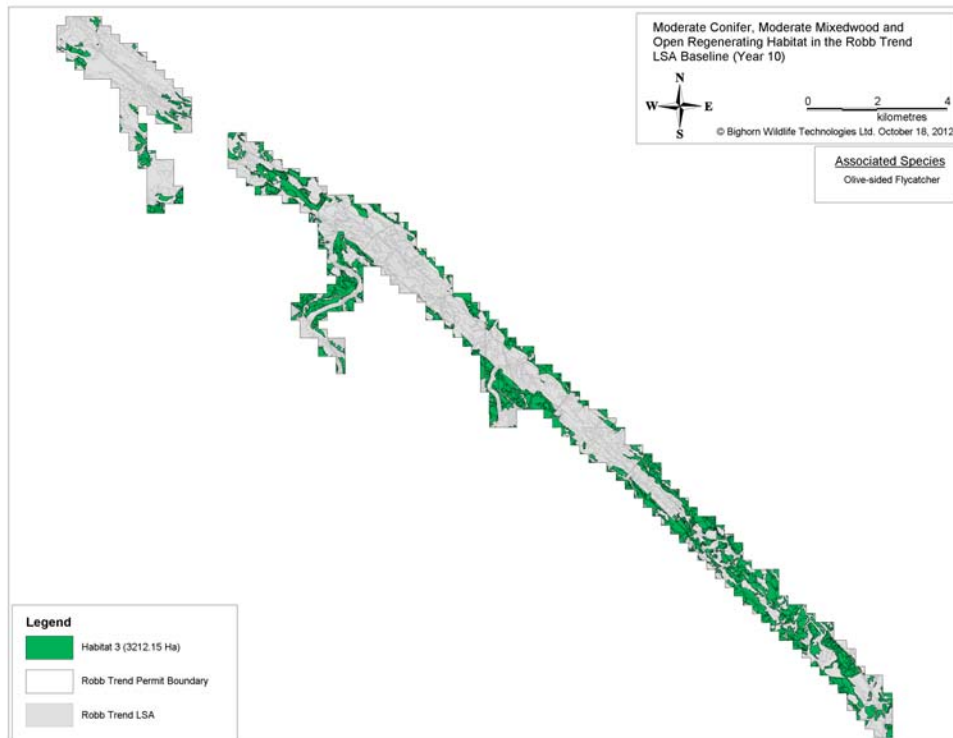
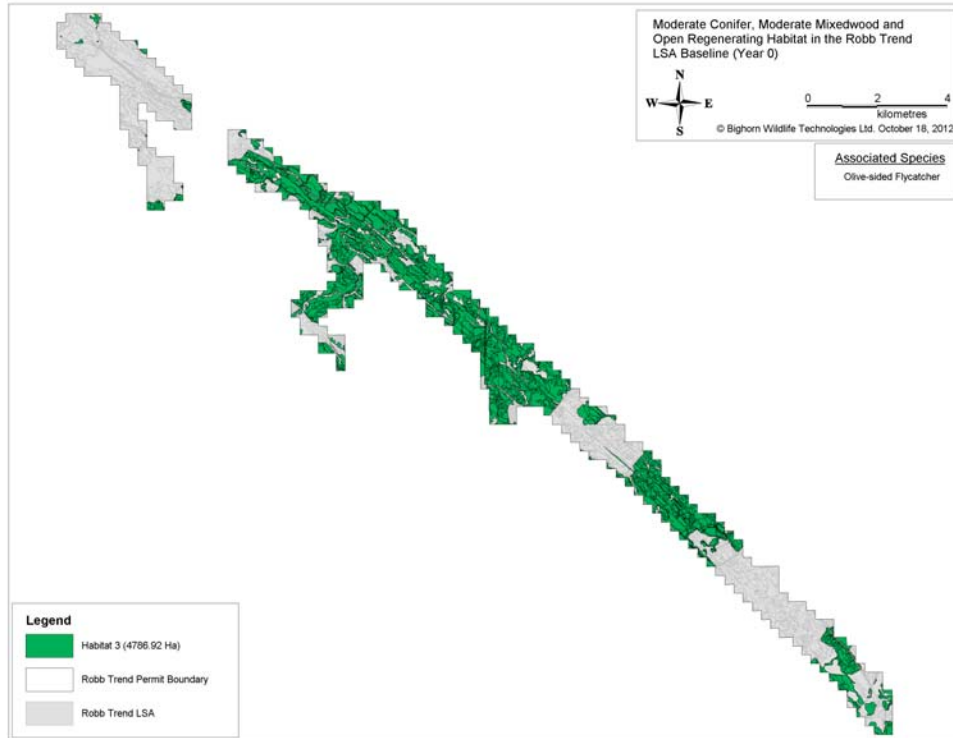


**RT SIR 69 – Maps. Habitat 3. Moderate Conifer / Moderate Mixedwood / Open Regen, RSA, Year 0 and Year 10**

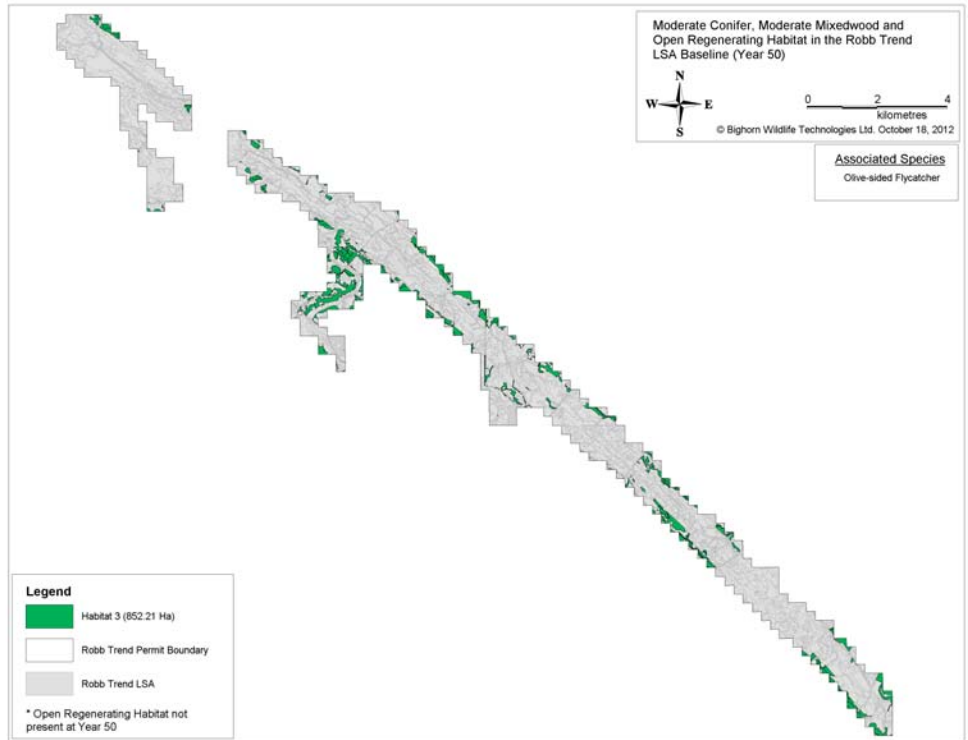
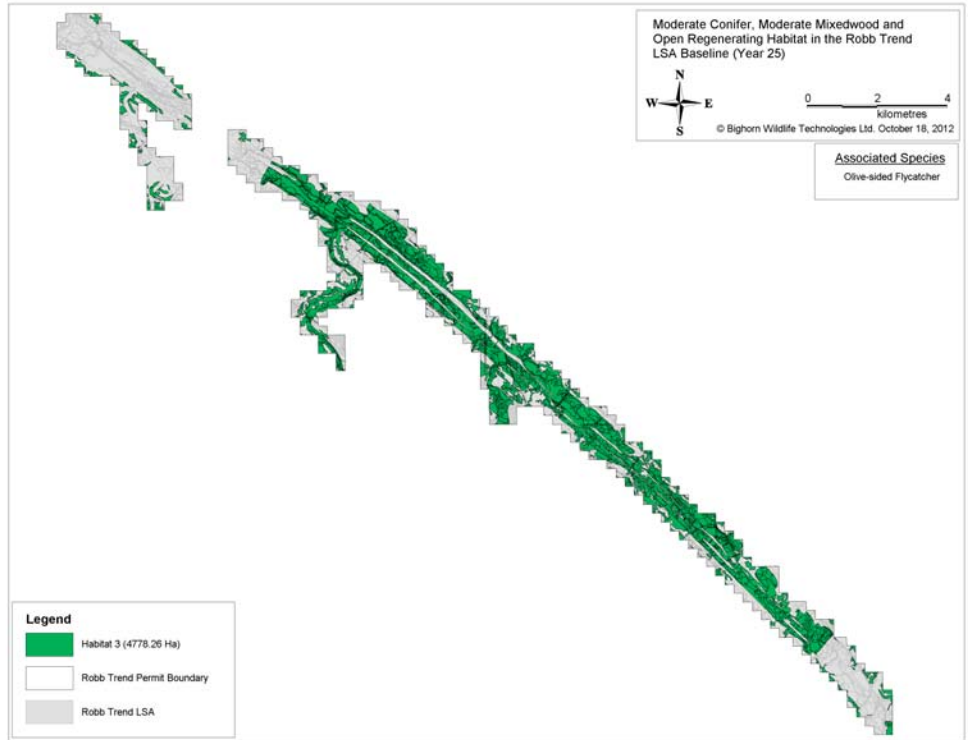


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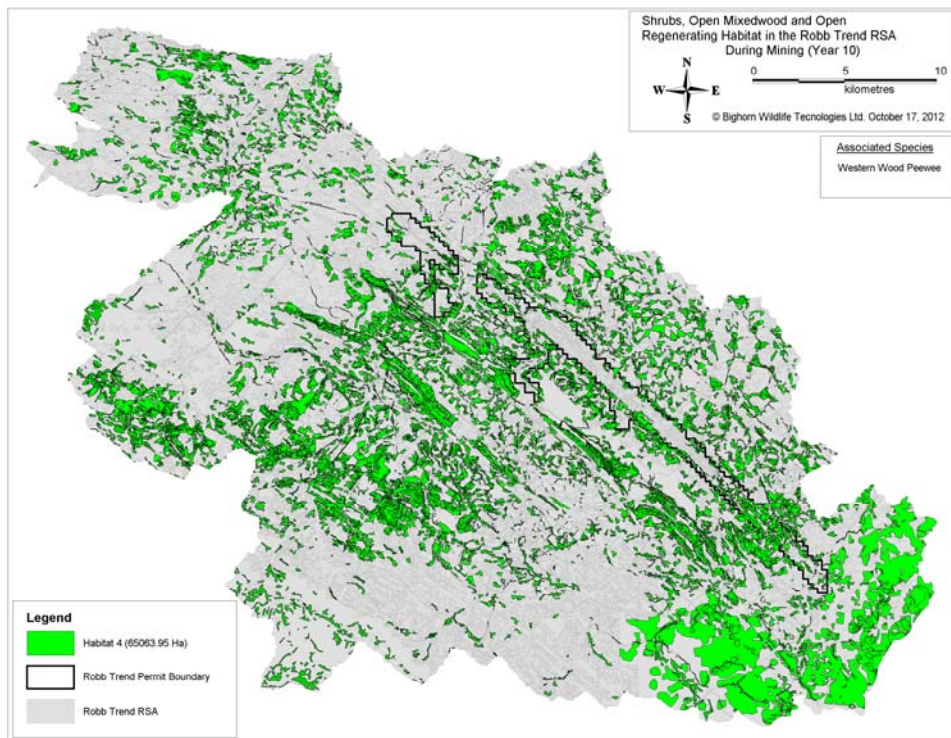
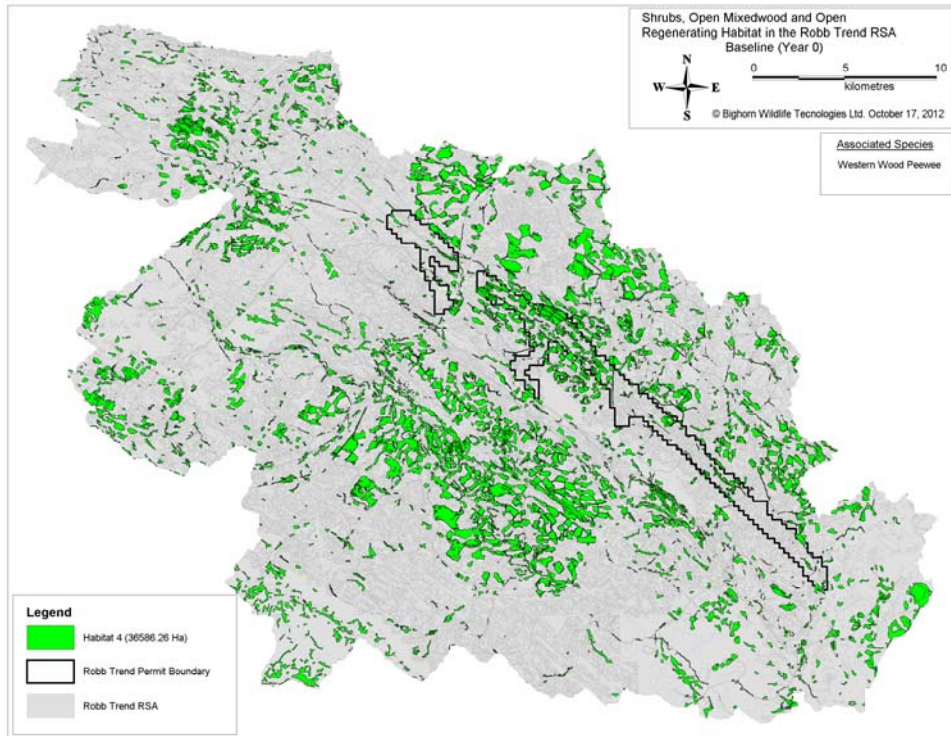




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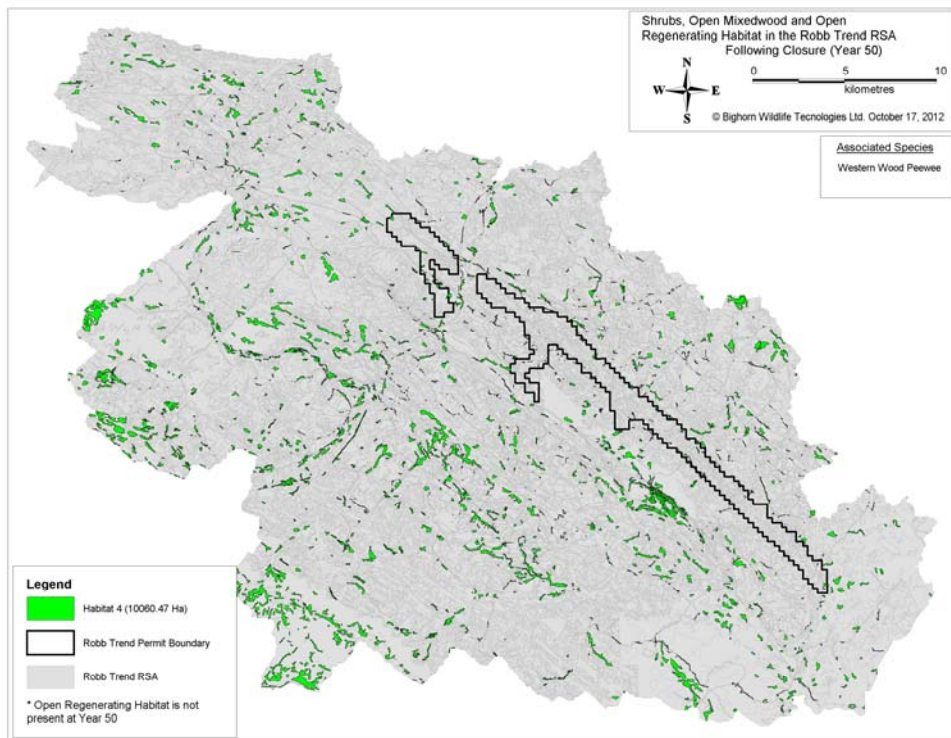
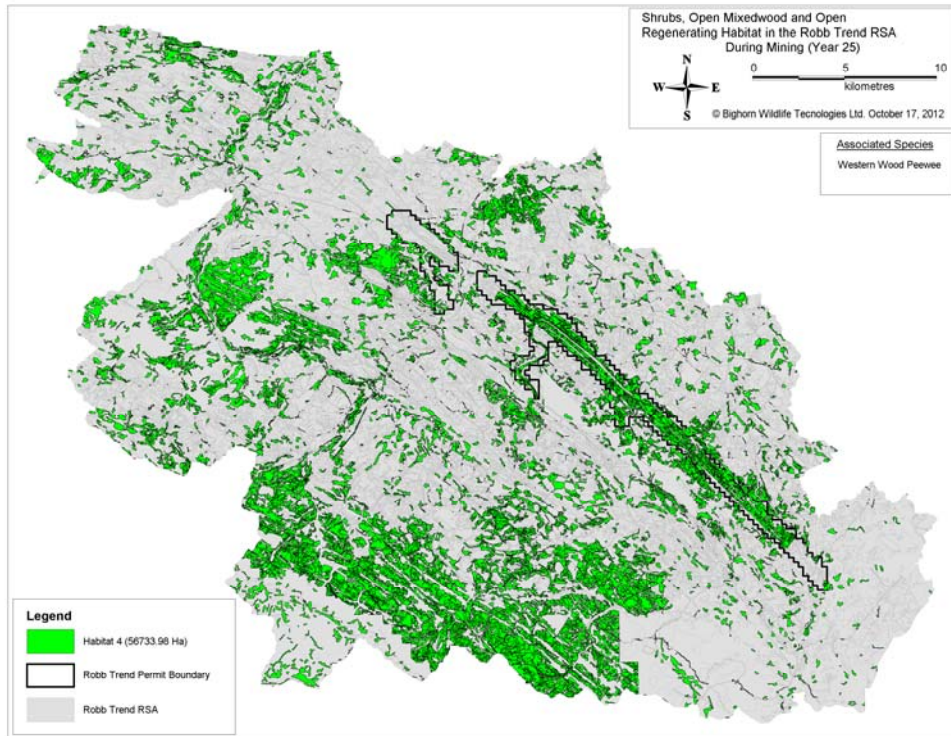


RT SIR 69 – Maps. Habitat 3. Open Wetland / Open Mixedwood / Open Regen, LSA, Year 25 and Year 50

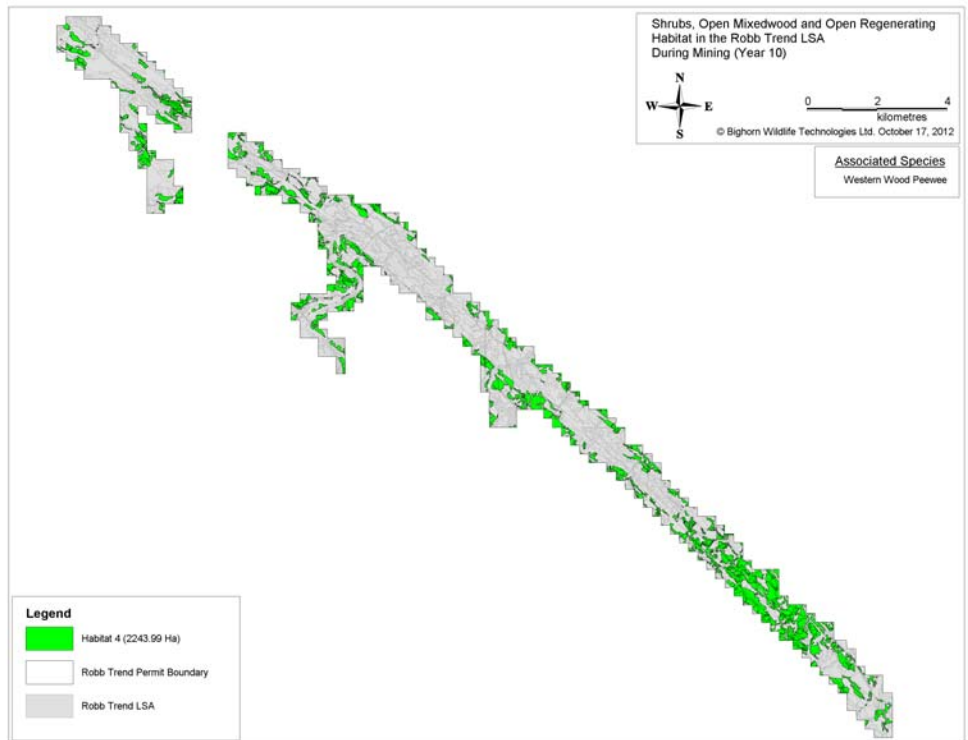
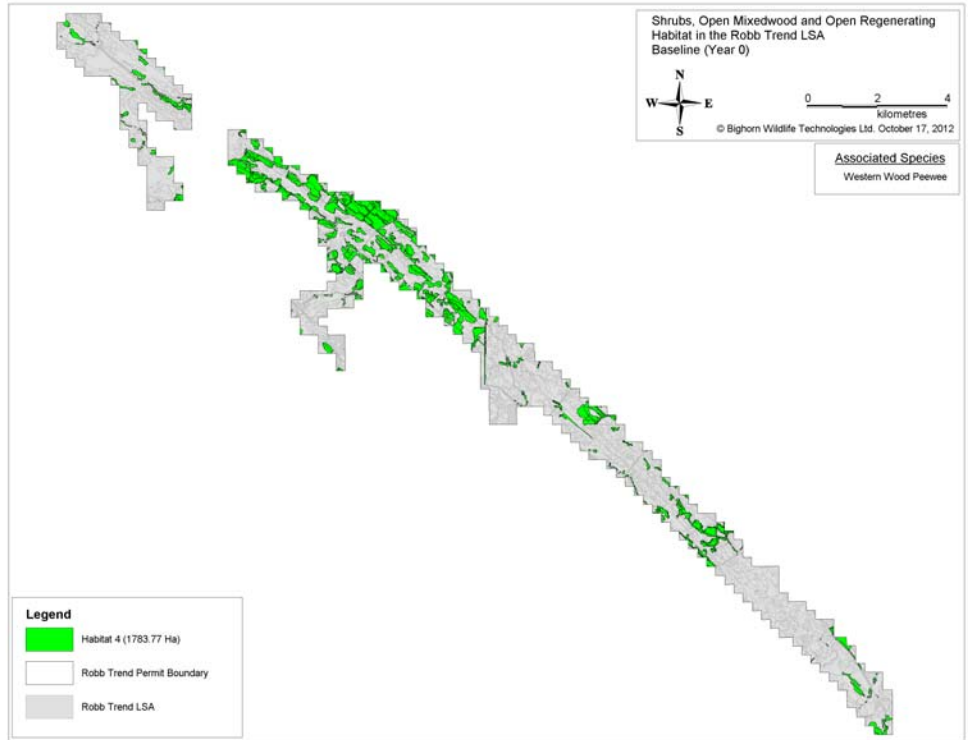


**RT SIR 69 – Maps. Habitat 4. Shrubs / Open Mixedwood / Open Regen, RSA, Year 0 and Year 10**

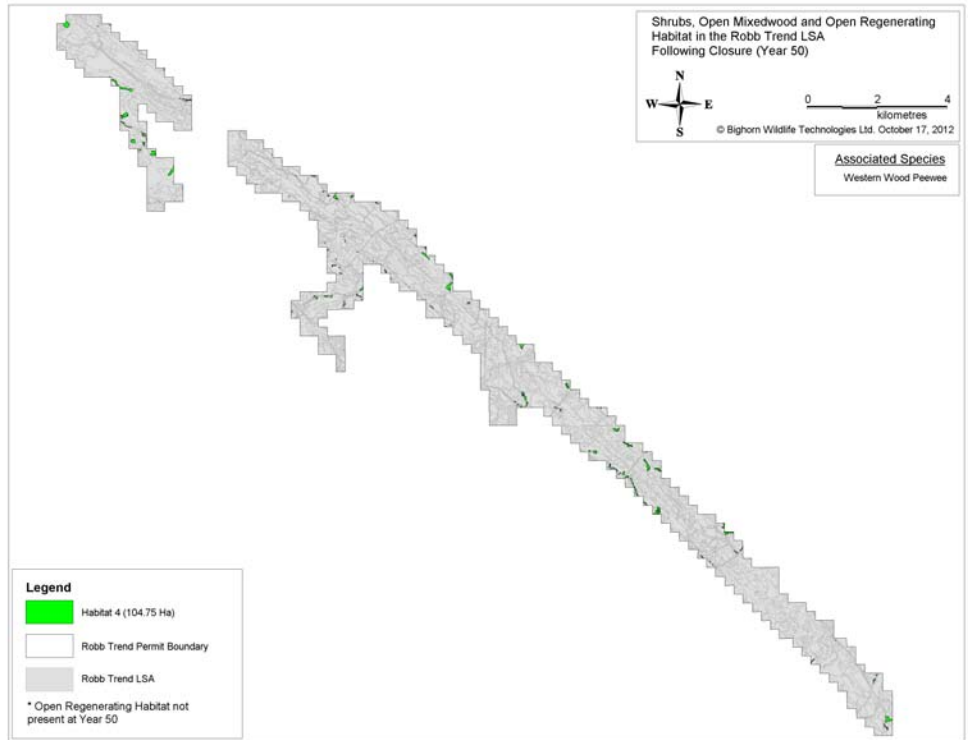
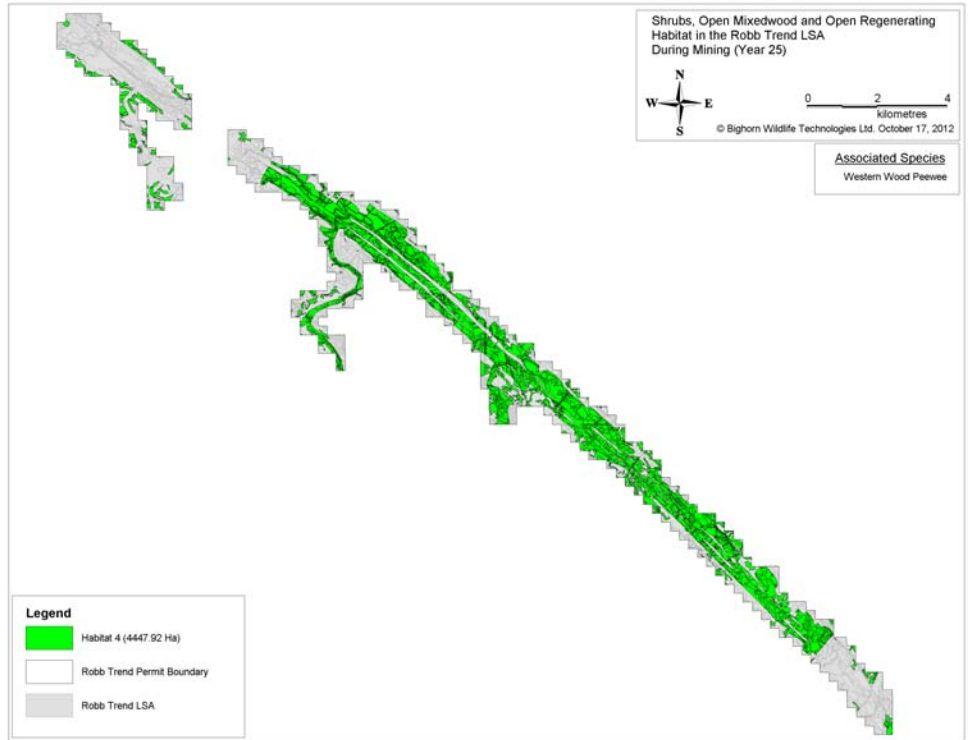




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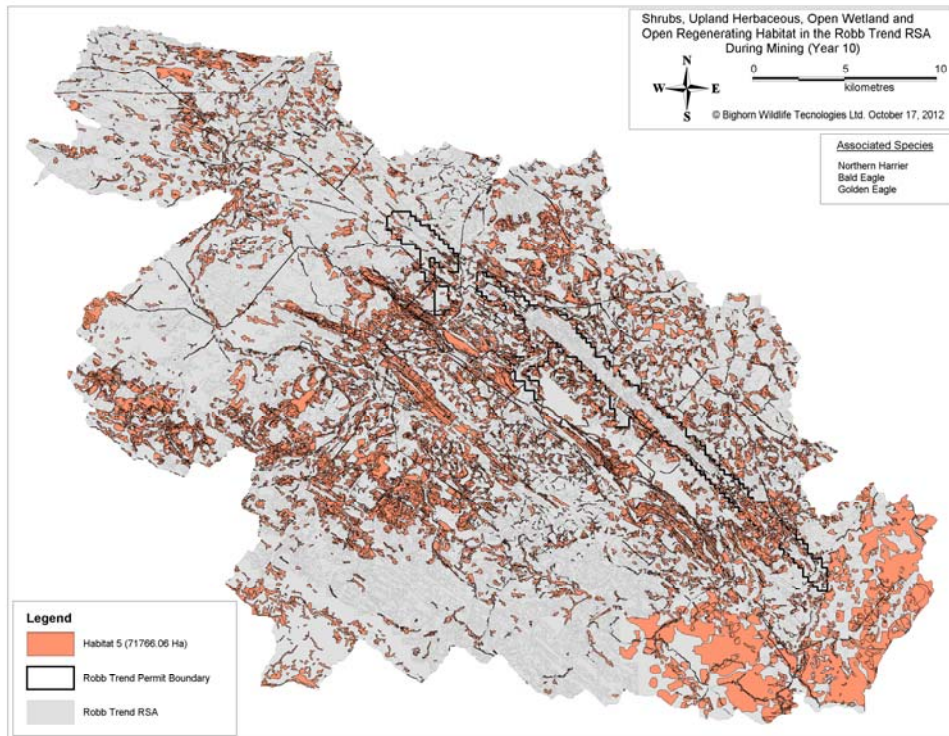
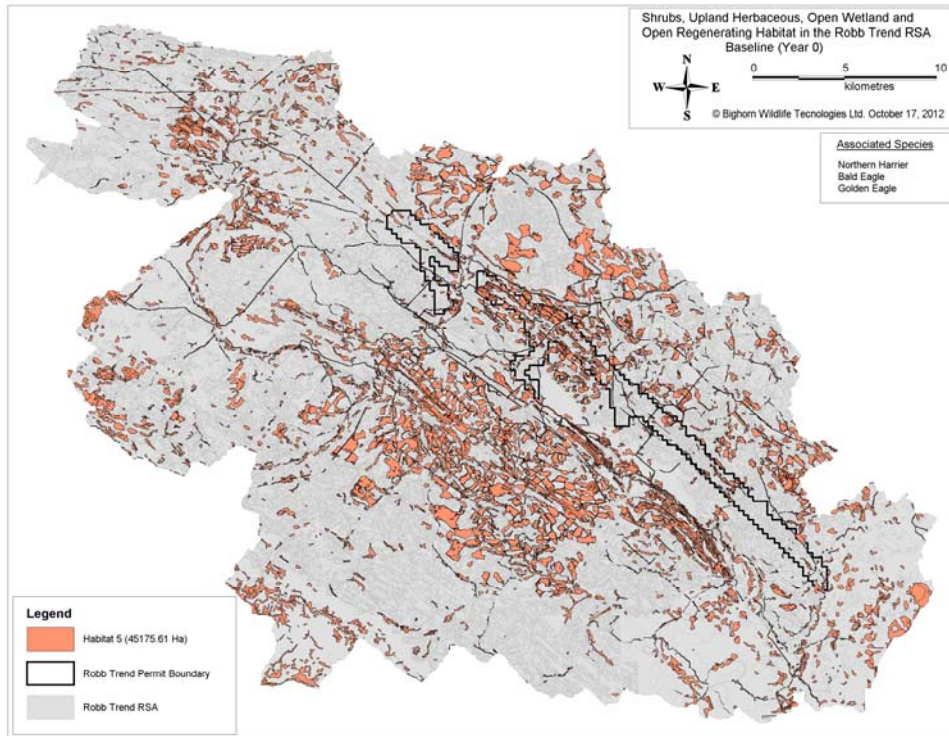


**RT SIR 69 – Maps. Habitat 4. Shrubs / Open Mixedwood / Open Regen, LSA, Year 0 and Year 10**

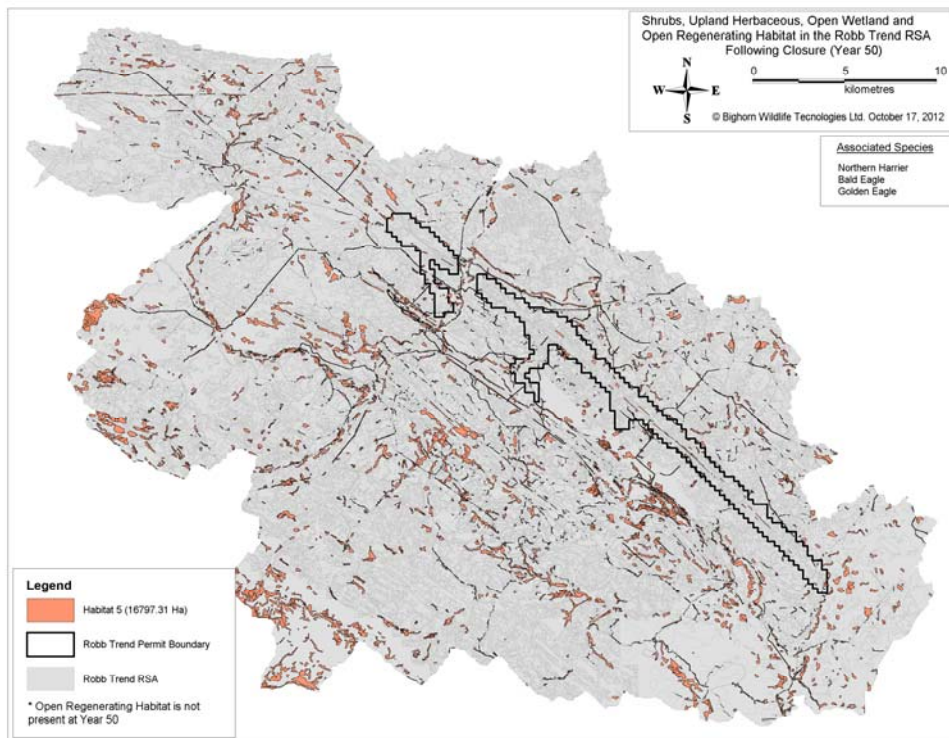
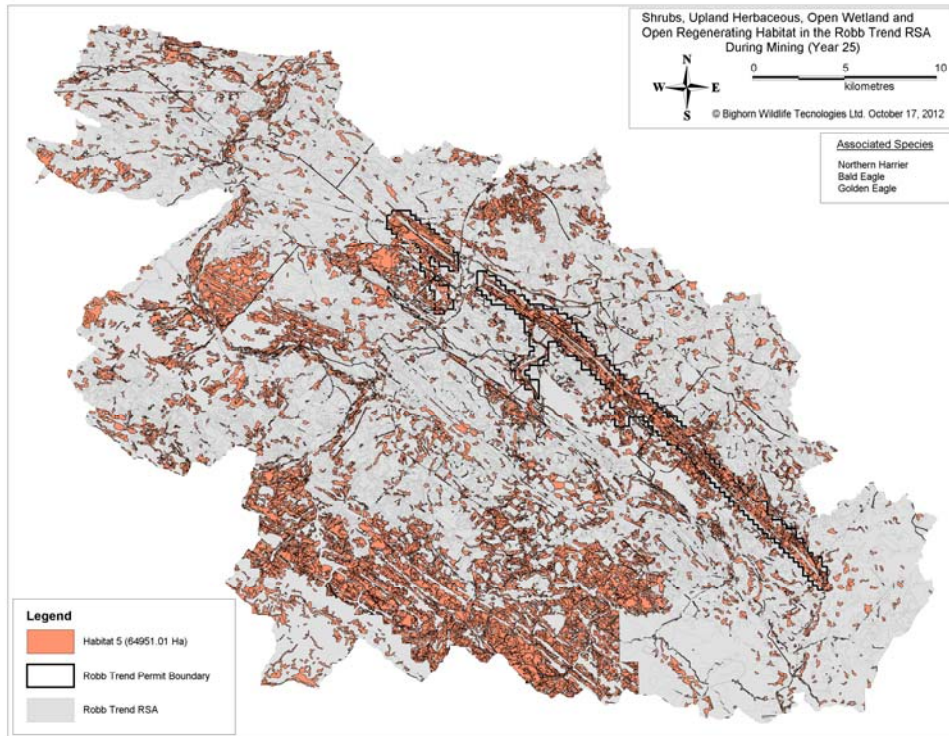


**RT SIR 69 – Maps. Habitat 4. Shrubs / Open Mixedwood / Open Regen, LSA, Year 25 and Year 50**

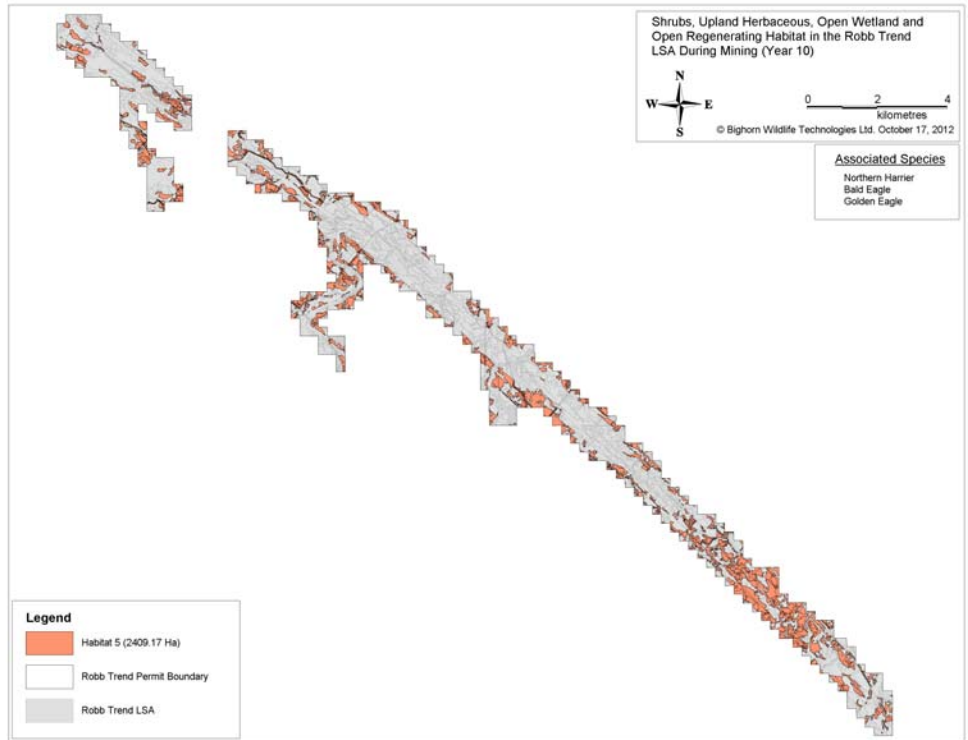
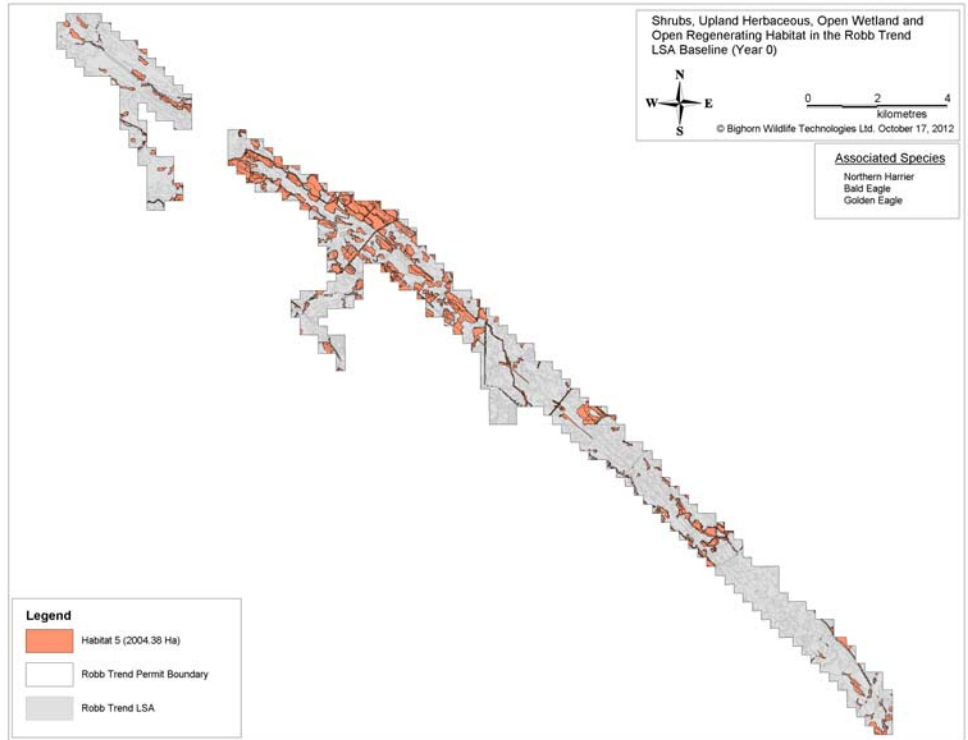




**RT SIR 69 – Maps. Habitat 5. Shrubs / Upland Herbaceous / Open Wetland / Open Regen, RSA, Year 0 and Year 10**

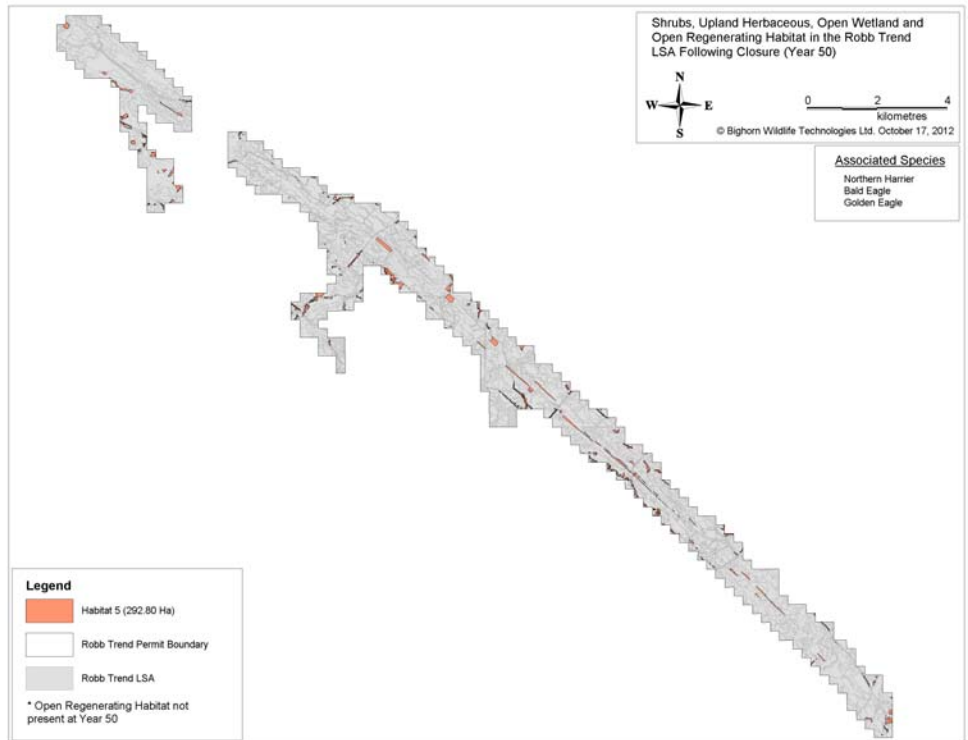
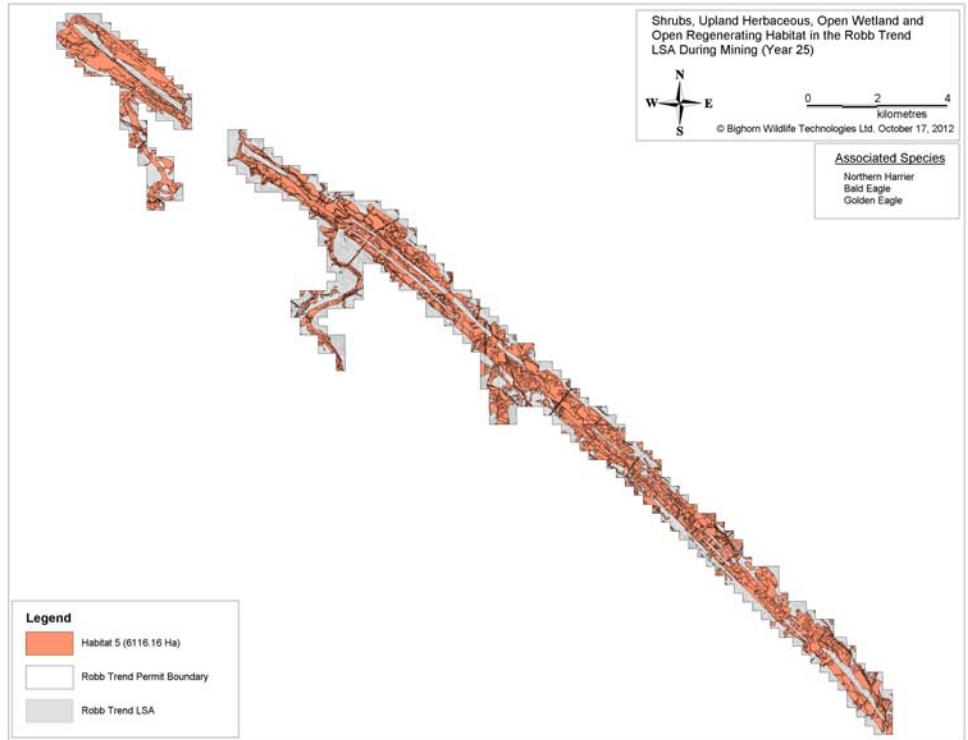


**RT SIR 69 – Maps. Habitat 5. Shrubs / Upland Herbaceous / Open Wetland / Open Regen, RSA, Year 25 and Year 50**

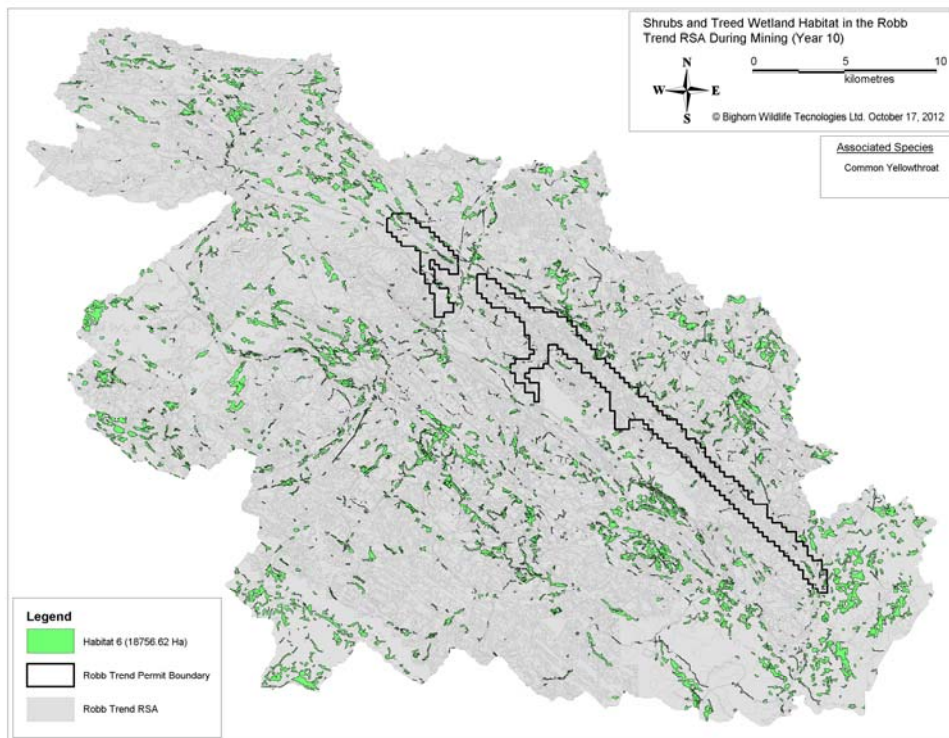
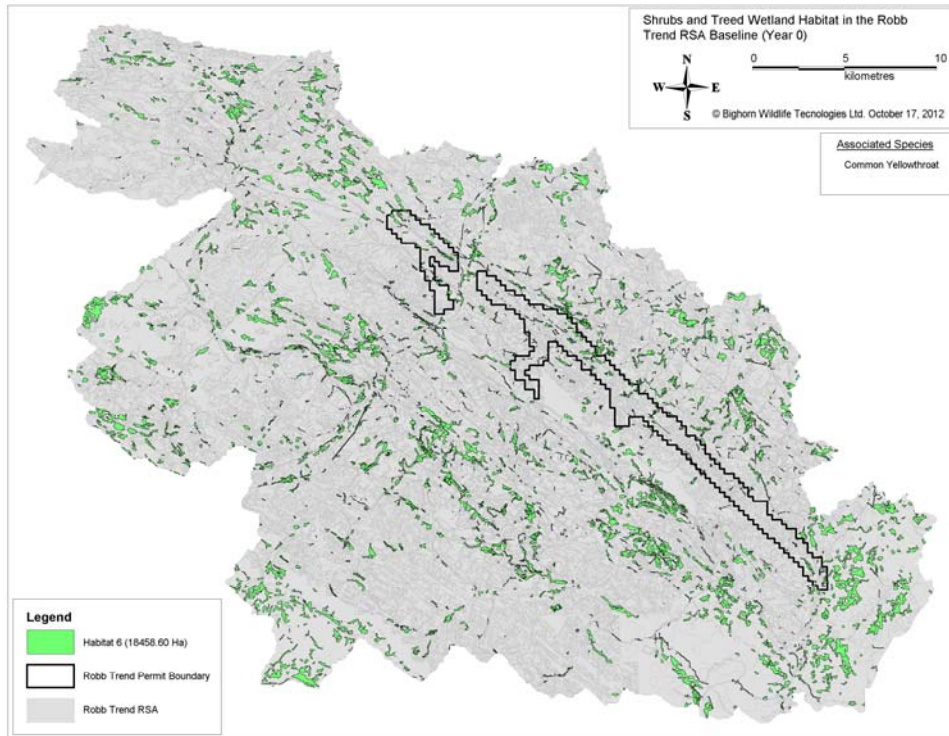


**RT SIR 69 – Maps. Habitat 5. Shrubs / Upland Herbaceous / Open Wetland / Open Regen, LSA, Year 0 and Year 10**





**RT SIR 69 – Maps. Habitat 5. Shrubs / Upland Herbaceous / Open Wetland / Open Regen, LSA, Year 25 and Year 50**



RT SIR 69 – Maps. Habitat 6. Shrubs / Treed Wetland, RSA, Year 0 and Year 10