IN THE MATTER of the Resource Management

Act 1991

AND

IN THE MATTER of the hearing of submissions

and further submissions on the Proposed Te Tai O Poutini Plan

STATEMENT OF EVIDENCE BY LUCY SMITH

Terra Firma Mining Limited

29 April 2024

1.0 Introduction

- 1.1 My full name is Lucy Catherine Smith and I am a Director of Terra Firma Mining Ltd ("Terra Firma"). I have a Bachelor of Technology in Biotechnology and Bioprocess Engineering from Massey University and a Post Graduate Diploma in Resources and Environmental Planning from the University of Waikato. I have had more than 20 years' experience as an Environmental Planner.
- 1.2 I have read and understood the Code of Conduct for Expert Witnesses contained in the Environment Court's Consolidated Practice Note 2023 and agree to comply with it. The report presented is within my area of planning expertise and I confirm that I have not omitted to consider material facts that might alter or detract from the opinions given in this evidence.

2.0 Interests in the West Coast

- 2.1 As noted in Terra Firma's original submission, the company's interests on the West Coast include a mining permit application to reopen Spring Creek mine, an underground coal mine near Greymouth. The intention is to produce specialist coal for the silicon manufacturing market for use in such products as solar panels and provide metallurgical coal for steel manufacturing. The mine will employ approximately 60 staff and provide indirect employment for up to 220 people.
- The application was lodged with New Zealand Petroleum and Minerals (NZP&M) in July 2020. The application is referenced as MP60664 and the mining permit area (MPA) is shown on NZP&M's website (**Figure 1**).

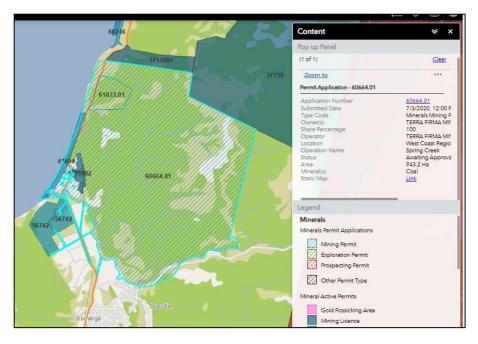


Figure 1: Excerpt from NZP&M website showing MPA for Spring Creek (60664.01)

(data.nzpam.govt.nz/permitwebmaps/?commodity=minerals)

3.0 Spring Creek Mining Permit Application

- 3.1 The bulk of the Spring Creek MPA is within the Mineral Extraction Zone shown on Maps 45 and 51 in the proposed TTPP. Smaller areas within the MPA are Open Space Zone and Rural Zone. **Attachment 1** shows the MPA sought by Terra Firma. This MPA is larger than the one shown in our submission as the boundary was been amended. An electronic shape file of the MPA also accompanies this evidence. **Attachment 2** shows where the proposed Mineral Extraction Zone underlies the MPA.
- 3.2 The total area of the Spring Creek MPA is 1274 hectares and is based on the Coal Mining Licence (CML) held by the previous operator (Solid Energy), including the inferred resource. Terra Firma's application includes legal descriptions of the parcels sought to be included in the MPA, which are collated in a Land Minerals Status report (Attachment 3). If and when the mining permit is granted by NZP&M, it will authorise Terra Firma to undertake mining operations within the MPA for the term of the permit.
- 3.3 Terra Firma is very frustrated at the lack of progress for granting a mining permit given the wealth of exploratory and operation knowledge and data that exists for Spring Creek Mine, which operated successfully for 17 years. However the company remains confident that the mining permit will be granted, and continues to work with NZP&M to that end.

4.0 Spring Creek Reconsenting

- 4.1 The previous mine operator (Solid Energy) held a number of resource consents to operate the mine and nearby coal processing plant. When the mine was closed in 2017, some consents were transferred to Birchfield Coal Mines Ltd and the remainder were surrendered. When the Spring Creek mining permit is granted, Terra Firma will seek the necessary suite of resource consents from Grey District Council and West Coast Regional Council to re-establish mine operations.
- 4.2 The mine production will be approximately 200,000 tonnes per year, considerably less than Solid Energy's operations. Environmental effects will be minimal and fall within the scope of previous licences and consents. A land use consent will be required for mining and ancillary activities as these activities will no longer be authorised under a CML. The Mineral Extraction Zone underlies the bulk of the Spring Creek MPA including the location of critical mining infrastructure and is the most appropriate zone for the proposed mine.

5.0 Submissions on the Mining and Minerals provisions

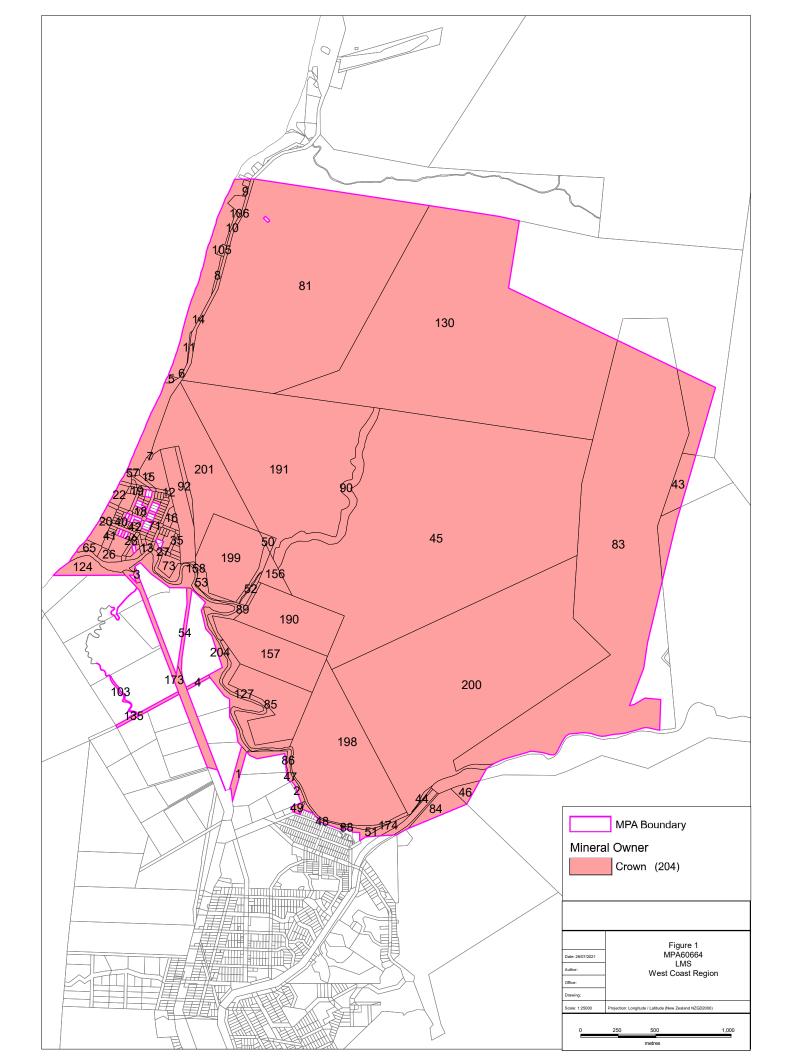
5.1 I have read the s42A Report – Mining and Minerals prepared by David Badham as it relates to Terra Firma's submission and will address key points below.

- 5.2 I support the planner's recommendations on the following submission points:
 - S537.021 (OSRZ-P14)
 - \$537.024 (Overview)
 - \$537.025 (MINZ-O1)
 - \$537.026 (MINZ-O2)
 - S537.027 (MINZ-P2)
 - S537.028 (MINZ-P3)
 - \$537.029 (MINZ-P4)
 - \$537.030 (MINZ-P5)
 - \$537.031 (MINZ-P7)
 - \$537.032 (MINZ-R2)
- 5.3 I have comments on the recommendation for our submission point S537.035, in relation to the Mineral Extraction Zone.
- 5.4 My area of concern is the zoning that underlies the Spring Creek mining permit application. Mr Badham rejects Terra Firma's submission that seeks to retain the Mineral Extraction Zone shown on Maps 45 and 51 of the Proposed TTPP (along with others' similar submissions) because it doesn't provide "sufficient information or clarity as to the relief requested." As a result he is unable to assess appropriateness (although welcomes further information at the hearing).
- 5.5 Lois Easton's memo dated 29 April 2022 to the TTPP Plan committee provides a summary of feedback on Draft Plan (it is provided as Appendix 4 of Mr Badham's s42A report). Ms Easton's memo identifies sites to be included within the MEZ. These are areas where there are discrete, long term mineral extraction activities currently authorised by coal mining or ancillary coal mining licences under the Coal Mines Act (1979), resource consents issued under the Resource Management Act (1991), or permitted activities in the Grey District. Although Spring Creek Mine is not currently operational, it is included on the list of Coal Mining Areas and Ancillary Facilities. I understand this is likely to be as a result of resource consents and licences held by Birchfields.
- 5.6 Regardless, Terra Firma maintains that the proposed Mineral Extraction Zone should be retained where it underlies the Spring Creek MPA. The mine was successfully operated for many years, the coal resource is well understood and the project represents a significant boost to the West Coast economy. Notwithstanding the lack of progress on NZP&M granting a mining permit, it remains a probability, not just in the short term but throughout the life of the TTPP and beyond. In the event that Terra Firma is unsuccessful in being granted a mining permit, the coal resource is significant and there is good potential that it will be mined in the future. Accordingly,

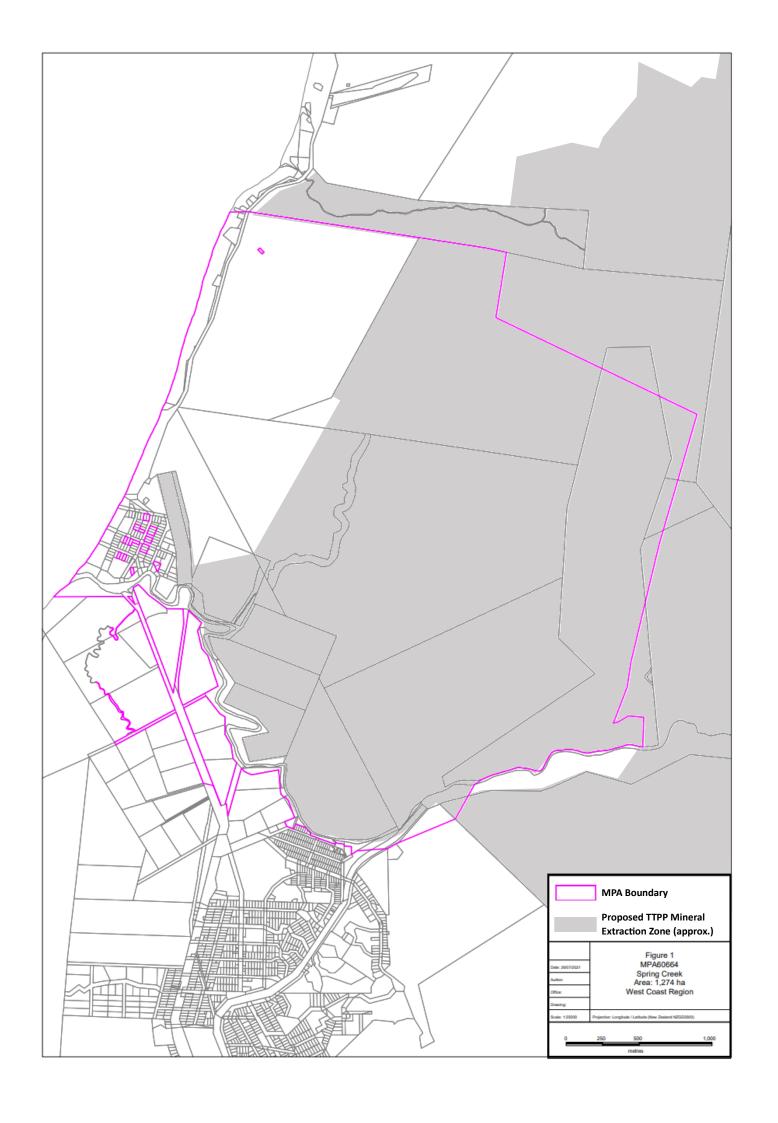
- the proposed Mineral Extraction Zone should be retained where it underlies the Spring Creek MPA.
- 5.7 The coal deposits within the Spring Creek MPA comprise approximately 11 million tonnes (MT) of measured resource, 9 MT of indicated resource, and 54 MT of inferred resource, giving a total resource 74 MT. This resource that would allow over 300 years of mining at our proposed rate.
- 5.8 It is not possible to determine whether the Mineral Extraction Zone is identical to the Mineral Extraction Area provided in Appendix 3 of Mr Badham's s42A report for the Paparoa Coal Field Rajah, Roa & [sic]. The area in Appendix 3 is shown on an aerial photo, however the absence of cadastral property boundaries and the low resolution means that Mineral Extraction Area boundary can only be used for indicative purposes.
- 5.9 Terra Firma seeks to retain the Mineral Extraction Zone shown on Maps 45 and 51 (and 156) of the Proposed TTPP.

Attachment 1

Spring Creek Mining Permit Area sought by Terra Firma



Attachment 2 Location of Mineral Extraction Zone underlying Spring Creek MPA



Attachment 3 Land Mineral Status Report for Spring Creek Mining Application 60664

LAND MINERAL STATUS REPORT

MINERAL MINING PERMIT APPLICATION 60664

Spring Creek

26 July 2021

New Zealand Petroleum and Minerals Ministry of Business, Innovation and Employment (MBIE) P O Box 1473 WELLINGTON

1	Permit Holders	Terra Firma Mining Limited
2	Minerals applied for	Coal
3	Mineral ownership in permit application area	Crown
4	Total Area	1,274 hectares approximately
5	District Council(s)	Grey District Council
6	Regional Council	West Coast Regional Council
7	Legal Description	See Schedule attached
8	Overlaps	Coal Ancillary Mining Licence 3715902
		Aggregate Minerals Mining Licence 323272,
		Gold Minerals Mining Permit 41894,
		Industrial rock and building stone, metal decorative pebbles, gold and rutile Minerals Mining Permit 55222.
9	Plan	The attached plan and description are suitable for the purposes of the Crown Minerals Act 1991
10	Survey Requirements	Nil
11	Remarks	Nil
12	Attachments	Schedule, Plan, MapInfo zipped file and CSV file

Report prepared by

Vivienne Bull Consultant

Schedule 2

MINERAL MINING PERMIT APPLICATION 60664

Spring Creek

The Land to Which the Mining Permit Relates

Land area: 1,274 hectares approximately

Regional Council: West Coast Council

Territorial Authority: Grey District Council

Description of Land Area:

All that area of land as shown on the attached map and more particularly identified in the spatial database held by the Chief Executive.

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
1	Part Section 3 SQ 124	No Registration	Crown
2	Crown Land	WS3B/1411	Crown
3	Closed Road Survey Office Plan 4463	Legal Road	Crown
4	Section 1 SO 341681	223622	Crown
5	Crown Land	No Registration	Crown
6	Closed Road Survey Office Plan 5102	No Registration	Crown
7	Part RES 1097	Gravel Res	Crown
		NZ Gaz 1931 p 1547	
8	Part RS 4954	No Registration	Crown
9	Closed Road Survey Office Plan 5102	No Registration	Crown
10	Part RS 4954	No Registration	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
11	Closed Road Survey Office Plan 5102	No Registration	Crown
12	Holland Street	No Registration	Crown
13	Coates Terrace	No Registration	Crown
14	Closed Road Survey Office Plan 5102	No Registration	Crown
15	RS 6648	WS5B/1161	Crown
16	Section 2 Block IV TN OF Rapahoe	WS5D/1121	Crown
17	Section 20 Block III TN OF Rapahoe	WS5D/1120	Crown
18	Section 11 Block II TN OF Rapahoe	WS5D/643	Crown
19	Section 1 SO 366308	288548	Crown
20	Legal Road	No Registration	Crown
21	Morpeth Street	No Registration	Crown
22	Legal Road	No Registration	Crown
23	Legal Road	No Registration	Crown
24	Legal Road	No Registration	Crown
25	Legal Road	No Registration	Crown
26	Coates Terrace	No Registration	Crown
27	Legal Road	No Registration	Crown
28	Part Section 13 Block IX TN OF Rapahoe	No Registration	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
29	Legal Road	No Registration	Crown
30	Section 2 Block I TN OF Rapahoe	WS5D/465	Crown
31	Section 1 Block III TN OF Rapahoe	WS5D/1120	Crown
32	Section 6 Block IX TN OF Rapahoe	WS5D/277	Crown
33	Section 2 Block V TN OF Rapahoe	WS5D/466	Crown
34	Section 10 Block VI TN OF Rapahoe	WS5D/592	Crown
35	Section 1 Block VIII TN OF Rapahoe	WS5D/1119	Crown
36	Section 6 Block II TN OF Rapahoe	WS5D/585	Crown
37	Section 4 SO 12321	WS8B/1277	Crown
38	Section 14 Block III TN OF Rapahoe	WS5D/1120	Crown
39	Section 1 Block II TN OF Rapahoe	WS3D/722	Crown
40	Section 18 Block V TN OF Rapahoe	WS3D/1135	Crown
41	Section 4 Block IX TN OF Rapahoe	WS5D/552	Crown
42	Section 13 Block V TN OF Rapahoe	No Registration	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
43	Part Section 5 Block I Cobden SD	State Coal Mine Reserve NZ Gaz 1902 p 417	Crown
44	Crown Land	State Coal Mines Act 1901 NZ Gaz 1902 p 1028	Crown
45	Part Section 5 Block I Cobden SD	State Coal Mine Reserve NZ Gaz 1902 p 417	Crown
46	Part Section 11 Block III Cobden SD	State Coal Mine Reserve NZ Gaz 1902 p 417	Crown
47	Legal Road	Crown Grant	Crown
48	Crown Land	No Registration	Crown
49	Section 1 SO 11727	362640	Crown
50	Part Section 2 Block I Cobden SD	State Coal Mine Reserve NZ Gaz 1902 p 417	Crown
51	Section 2 SO 11878	WS8A/304	Crown
52	Crown Land SO Plan 10865, Marginal Strip - Rocky Creek	Fixed Marginal Strip - s.24(3) Conservation Act 1987	Crown
53	Section 1 SO 12474	WS8C/1260	Crown
54	Rapahoe Branch Railway	Railway	Crown
55	Section 14 Block II TN OF Rapahoe	WS5B/1026	Crown
56	Morpeth Street	No Registration	Crown
57	State Highway No 6	No Registration	Crown
58	Section 1 Block IV TN OF Rapahoe	WS5D/1121	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
59	Section 2 Block VIII TN OF Rapahoe	WS5D/1119	Crown
60	Section 19 Block III TN OF Rapahoe	WS5D/1120	Crown
61	Section 5 Block III TN OF Rapahoe	WS1B/1121	Crown
62	Section 13 Block III TN OF Rapahoe	WS1B/329	Crown
63	Section 2 Block VII TN OF Rapahoe	WS3D/68	Crown
64	Section 4 Block IV TN OF Rapahoe	WS5D/1121	Crown
65	Legal Road	No Registration	Crown
66	Morpeth Street	No Registration	Crown
67	Coates Terrace	No Registration	Crown
68	Holland Street	No Registration	Crown
69	Holland Street	No Registration	Crown
70	Section 1 SO 11676	WS5D/808	Crown
71	Section 14 Block VI TN OF Rapahoe	WS1B/478	Crown
72	Hawkin Street	No Registration	Crown
73	RS 3279	WS3D/1140	Crown
74	Section 11 Block VI TN OF Rapahoe	WS5D/553	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
75	Section 9 Block VI TN OF Rapahoe	WS5C/384	Crown
76	Section 10 Block IX TN OF Rapahoe	WS5D/591	Crown
77	Section 3 Block V TN OF Rapahoe	WS5D/466	Crown
78	Section 15 Block V TN OF Rapahoe	WS8C/301	Crown
79	Section 16 Block II TN OF Rapahoe	WS5D/585	Crown
80	State Highway No 6	No Registration	Crown
81	RS 6692	Stewardship Area - s.25 Conservation Act 1987	Crown
82	Section 3 Block IX TN OF Rapahoe	WS5D/552	Crown
83	Section 1 SO 11892	WS8C/434	Crown
84	Part RS 5129 Conservation Area - Runanga	Stewardship Area - s.25 Conservation Act 1987	Crown
85	Section 32 Block III Cobden SD Coal Creek Wildlife Management Reserve	NZ Gaz 1980 p 428, Government Purpose Reserve - s.22 Reserves Act 1977	Crown
86	Legal Road	Crown Grant	Crown
87	Section 2 SO 11727	362640	Crown
88	Crown Land Marginal Strip - Seven Mile Creek- Dunollie	Fixed Marginal Strip – s 24 (3) Conservation Act 1987	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
89	Legal Road	Crown Grant	Crown
90	Section 5 SO 428995, Conservation Area - Rocky Creek	NZ Gaz 2010 p 3845 Stewardship Area – s.25 Conservation Act 1987	Crown
91	Section 12 Block III TN OF Rapahoe	WS1A/748	Crown
92	Section 1 SO 11881	WS8A/302	Crown
93	Section 9 Block III TN OF Rapahoe	WS1B/429	Crown
94	Section 16 Block III TN OF Rapahoe	WS3C/219	Crown
95	Section 21 Block III TN OF Rapahoe	WS5D/1120	Crown
96	Section 14 Block VII TN OF Rapahoe	WS5C/319	Crown
97	Legal Road	No Registration	Crown
98	Section 3 Block VII TN OF Rapahoe	WS8A/314	Crown
99	Section 2 Block III TN OF Rapahoe	WS5D/1120	Crown
100	Section 3 Block IV TN OF Rapahoe	WS5D/1121	Crown
101	Legal Road	No Registration	Crown
102	Legal Road	No Registration	Crown
103	Legal Hydro	No Registration	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
104	Part RES 983	NZ Gaz 1927 p 678	Crown
105	Section 1 SO 12321	WS8B/1268	Crown
106	Closed Road Survey Office Plan 5102	No Registration	Crown
107	Section 15 Block II TN OF Rapahoe	WS3C/210	Crown
108	Section 2 SO 12138	WS8C/1050	Crown
109	Section 8 Block IX TN OF Rapahoe	WS5D/278	Crown
110	Section 12 Block II TN OF Rapahoe	WS5D/643	Crown
111	Section 2 Block II TN OF Rapahoe	WS3C/1263	Crown
112	Holland Street	No Registration	Crown
113	Coates Terrace	No Registration	Crown
114	Legal Road	No Registration	Crown
115	RES 1000	NZ Gaz 1979 p 2035	Crown
116	Part RES 983	NZ Gaz 1927 p 678	Crown
117	RES 629	NZ Gaz 1979 p 2035 Reserve	Crown
118	Section 8 Block VI TN OF Rapahoe	WS5D/821	Crown
119	Section 5 Block VI TN OF Rapahoe	WS5C/384	Crown
120	Section 3 SO 12321	WS8B/1269	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
121	Section 17 Block V TN OF Rapahoe	WS1A/1044	Crown
122	Section 12 Block V TN OF Rapahoe	WS5D/590	Crown
123	Section 5 Block V TN OF Rapahoe	WS3A/1500	Crown
124	Legal Road	No Registration	Crown
125	Part Block III SD Cobden	WS2C/1321	Crown
126	Crown Land	WS3B/1411	Crown
127	Legal Road	Crown Grant	Crown
128	Rocky Creek	No Registration	Crown
129	RS 5058	WS3C/217	Crown
130	Part Section 25 SQ 124	State Coal Mine Reserve NZ Gaz 1902 p 417	Crown
131	Section 1 Block VII TN OF Rapahoe	WS1B/725	Crown
132	Legal Road	No Registration	Crown
133	Legal Road	No Registration	Crown
134	Legal Road	No Registration	Crown
135	Legal Road	No Registration	Crown
136	McLeod Street	No Registration	Crown
137	Section 15 Block IX TN OF Rapahoe	WS5C/867	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
138	Section 11 Block V TN OF Rapahoe	WS5D/590	Crown
139	Section 9 Block II TN OF Rapahoe	WS5D/642	Crown
140	RS 3672	WS8A/543	Crown
141	Holland Street	No Registration	Crown
142	Morpeth Street	No Registration	Crown
143	Section 14 Block V TN OF Rapahoe	WS5B/209	Crown
144	Section 3 Block I TN OF Rapahoe	WS3B/777	Crown
145	Section 8 Block V TN OF Rapahoe	WS5D/467	Crown
146	Section 2 Block IX TN OF Rapahoe	WS5D/552	Crown
147	Section 1 Block I TN OF Rapahoe	WS5D/465	Crown
148	State Highway No 6	No Registration	Crown
149	Morpeth Street	No Registration	Crown
150	Legal Road	No Registration	Crown
151	RES 629	NZ Gaz 1979 p 2035	Crown
152	Section 6 Block VI TN OF Rapahoe	WS5C/384	Crown
153	Section 15 Block VI TN OF Rapahoe	WS5A/513	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
154	State Highway No 6	NZ Gaz 2003 p 1089	Crown
155	Rewanui Branch Railway	NZ Gaz 1922 p1856	Crown
156	Crown Land	State Coal Mine Reserve NZ Gaz 902 p 1028	Crown
157	Section 31 Block II Cobden SD Coal Creek Wildlife Management Reserve	NZ Gaz 1980 p 428, Government Purpose Reserve - s.22 Reserves Act 1977	Crown
158	Legal Road	Crown Grant	Crown
159	Section 3 Block VIII TN OF Rapahoe	WS5D/1119	Crown
160	Section 4 Block III TN OF Rapahoe	WS1B/479	Crown
161	Section 5 Block II TN OF Rapahoe	WS5D/585	Crown
162	Holland Street	No Registration	Crown
163	Section 10 Block II TN OF Rapahoe	WS5D/642	Crown
164	Section 2 SO 428995	NZ Gaz 2010 p 3845	Crown
165	State Highway No 6	No Registration	Crown
166	Legal Road	No Registration	Crown
167	Section 7 Block VI TN OF Rapahoe	WS1B/1335	Crown
168	Section 4 Block V TN OF Rapahoe	WS5D/466	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
169	Section 6 Block V TN OF Rapahoe	WS5D/466	Crown
170	State Highway No 6	No Registration	Crown
171	Coates Terrace	No Registration	Crown
172	Stratham Street	No Registration	Crown
173	State Highway No 6	No Registration	Crown
174	Part Block III Cobden SD	WS2C/1321	Crown
175	Crown Land Survey Office Plan 10865, Marginal Strip - Rocky Creek	Fixed Marginal Strip - s.24(3) Conservation Act 1987	Crown
176	Legal Road	No Registration	Crown
177	Section 18 Block III TN OF Rapahoe	WS5D/1120	Crown
178	Section 3 Block III TN OF Rapahoe	WS5D/1120	Crown
179	Section 15 Block III TN OF Rapahoe	WS5D/1120	Crown
180	Section 2 SO 12321	WS8B/1280	Crown
181	Lot 1 DP 435208	532017	Crown
182	Legal Road	No Registration	Crown
183	State Highway No 6	No Registration	Crown
184	Section 4 Block VI TN OF Rapahoe	WS5D/553	Crown
185	Section 1 Block V TN OF Rapahoe	WS5D/466	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
186	Section 1 Block IX TN OF Rapahoe	WS5D/276	Crown
187	Section 5 Block IX TN OF Rapahoe	WS1B/1073	Crown
188	State Highway No 6	No Registration	Crown
189	Part Block III Cobden SD	WS2C/1320	Crown
190	Section 30 Block III Cobden SD Conservation Area - Rapahoe	Stewardship Area - s.25 Conservation Act 1987	Crown
191	Part Section 4 Block I Cobden SD	State Coal Mine Reserve NZ Gaz 1902 p 417	Crown
192	Section 17 Block III TN OF Rapahoe	WS5D/1120	Crown
193	Section 1 SO 12138	WS8C/1050	Crown
194	Lot 2 DP 435208	532018	Crown
195	State Highway No 6	No Registration	Crown
196	Section 16 Block V TN OF Rapahoe	WS8C/302	Crown
197	Section 11 Block IX TN OF Rapahoe	WS5D/591	Crown
198	RS 4970 Conservation Area - Seven Mile Creek	Stewardship Area - s.25 Conservation Act 1987	Crown
199	RS 6589	WS5D/573	Crown
200	Part Section 11 Block III Cobden SD	Doc 089380	Crown

Ref	Legal Description	Instrument of Title	Ownership of non- statute minerals
201	Part RES 184	State Coal Mine Reserve NZ Gaz 1941 p 1481	Crown
202	Rapahoe Branch Railway	NZ Gaz 1922 p 1856	Crown
203	Seven Mile Creek	No Registration	Crown
204	Legal Road	Crown Grant	Crown

