

28 April 2014

Our ref: S12073

Department of Conservation
Private Bag 701
Hokitika 7842
Attn: Judi Brennan/Toby Wilkes

By email: jbrennan@doc.govt.nz/toby@tobywilkes.com

Dear Judi & Toby,

Re: Mining Access Agreement – Rangitira Developments Ltd

In reference to our previous correspondence on the above matter, please find enclosed further information in relation to the application for a Mining Access Agreement with the Department of Conservation (DoC) to undertake open cast coal mining activities over an area of approximately 13 hectares of DoC land known as DoC Stewardship Land.

The further information attached includes;

- Executive Summary of Proposal
- Application Form – Mining Access Agreement
- Summary of Assessment of Alternatives of Access Routes to Proposed Mine
- Summary of Economic Assessment of Direct Net Economic Benefits of the Proposed Mining Activities
- Legal Advice relating to access to the Water Conservation Reserve

This information shall be considered and read in conjunction with the information submitted to DoC on the 16 February 2014 to be a formal application for an access agreement under the Crown Minerals Act 1991.

A separate application has been made to the DoC for an *Easement Concession* for the proposed mine access road under the Conservation Act 1987.

In terms of the project, we are currently waiting for more detailed mine planning to be completed, which will provide greater detail around the mine schedule and proposed areas of disturbance, as well as providing guidance to our various experts particularly in the field of ecology and rehabilitation for the site. Once the revised mine plans are available, these will be provided to the Department to form part of the application for a Mining Access Agreement, along with details of any updated advice received from our various experts, particularly in the field of Acid Base Accounting.



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We are also continuing to progress an application for mining access purposes under the Crown Minerals Act with the Buller District Council (BDC) as the administrator of the Buller Water Conservation Reserve, and expect that this process will be run in parallel to the request for access from DoC.

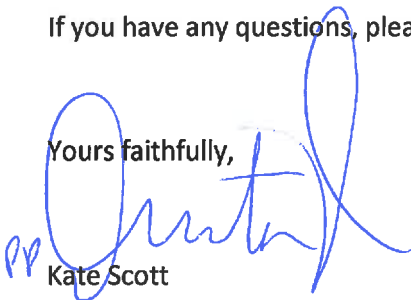
Applications for resource consents from both the BDC and the West Coast Regional Council (WCRC) are also being advanced, and I anticipate that such applications will be submitted to the respective agencies by the end of June 2014, as part of which consultation with a range of interested parties will be carried out.

The various experts engaged by the applicant to prepare the supporting information for Mining Access purposes have indicated a willingness to meet with DoC, particularly once your own experts have had the opportunity to review the application for access, and we would support the coordination of a project meeting of this nature at some point in the near future to work through any questions or queries relating to the project.

I trust that the information already provided, in conjunction with the further information attached to this letter is sufficient to enable this application to be formally received, and I look forward to the opportunity to work with you on this project over the coming months.

If you have any questions, please do not hesitate to contact me at any time.

Yours faithfully,

A handwritten signature in blue ink, appearing to read 'Kate Scott', with a large loop at the end. To the left of the signature, there are two small blue initials 'PP'.

Kate Scott

For Rangitira Developments Ltd

Te Kuha Project – Executive Summary Mining Access Agreement

The Te Kuha Project is a joint venture known as the Te Kuha Limited Partnership (TKLP), which is a fully owned subsidiary of Rangitira Developments Limited (Rangitira), the company that holds Mining Permit 41-289.

The project is currently focused on obtaining the necessary regulatory approvals, including mining access agreement from all affected landowners, easement concession and land access agreements for the development of a mine access road, and resource consents associated with the proposal to undertake opencast coal mining within the permit area, over an area of approximately 70 ha. The total mining permit encompasses an area of approximately 860 hectares.

The applicant in the case of an application for a *Mining Access Agreement* under the Crown Minerals Act with the Department of Conservation (DoC) shall be the permit holder, **Rangitira Developments Limited**.

Rangitira are seeking an access agreement from DoC under Section 61 Crown Minerals Act 1991. An agreement is required as the proposed area of mining will be located on approximately 13 hectares of DoC land legally described as Crown Land Block X Kawatiri Survey District, and known as Stewardship Land. The area where mining activities are to occur is separate to the area over which an agreement will also be sought for land access purposes to facilitate the construction and operation of a mine haul road.

The proposed mine footprint is largely located in land known as the Buller Water Conservation Reserve, which is administered by the Buller District Council (BDC), and accordingly a separate application will be made to the BDC under Section 61 Crown Minerals Act in regards access to this land for mining purposes.

Stevenson Mining Ltd
Proposed Access Haul Road
Te Kuha Mine, Buller

Prepared by Chris J. Coll Surveying Ltd for
Stevenson Mining Ltd
Private Bag 94000
Manukau City
Auckland



STEVENSON

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Stevenson Mining Ltd: Proposed Access Haul Road – Te Kuha Mine

Background

The access to the proposed mine site involved an extensive investigation into the various alternatives and final purpose for the access/haul road. The coal field had been identified and mapped in the 1970-80's as being at an approximate elevation of 650m a.s.l.

Several parameters were considered at the beginning of the access investigation and influenced the ultimate proposal:-

- i. Because of the visual aspect/character of the landscape and the fact that it would overlook Westport township, every effort had to be made to minimise the view from Westport of possible scarring from the roadline formation.
- ii. The road had to be multi-functional e.g. able to provide light vehicle access to the mine site and plant on the hill and be wide enough to accommodate road trucks and trailer units bringing coal off the mine site.
- iii. A gradient of 1 in 10 would allow trucks to haul earthmoving equipment and associated plant up the hill to the mine site and would allow road trucks the ability to transport coal down to the railway sidings and coal handling site at Te Kuha.
- iv. The gazetted Scenic Reserves (Gaz. 1981 pg. 1335) adjoining the Buller River were considered too environmentally sensitive and politically difficult to be used for access purposes. In the preliminary stages, Stevenson Mining investigated a Doppelmayr gondola and conveyor system to bring the coal in a straight line from the mine site to the railway siding. The proposed towers would have required light vehicle access to them for maintenance and repairs. The resultant corridor and footprint would have been visible from the "Crossroads" area (the colloquial name for the intersection of State Highways 6 and 67) and along State Highway 6 up the Buller Gorge as well as crossing this gazetted Scenic Reserve.
- v. The Water Conservation Reserves could be utilised if their original purpose and philosophy are preserved.

Options Considered

Route 3 - Preferred

The third option considered and ultimately favoured (see appended sheet 1 of 15 and 3 of 15) has been designed to allow for shielding behind gullies, ridges and existing trees. The route from chainage 3400 to 6400 follows in and out of the existing tree cover and the road will show in “gaps” that are intended to break up the visual, continual road line. From chainage 1600 to chainage 3000, the road will track behind the ridgelines and gullies and will be screened from views in Westport and towards Sergeants Hill. However, it will be visible from parts of Carters Beach and the Crossroads area. From chainages 0 to 1600 (see appended sheet 1 of 15 “Various Proposed Access Routes from Waterworks and Te Kuha”), the road is shielded by the terrace adjoining Nine Mile Road and only visible from parts of State Highway 6 between the Crossroads and the mouth of the Buller Gorge at Windy Point and along approximately 1km from the Crossroads towards Greymouth.

The initial part of the access/haul road from the railway siding at Te Kuha and the terrace land on the appended sheet 6 “Preferred Access Route 3 over Te Kuha Farms” is approximately 1420m long and would look like part of the farm infrastructure. It would be visible from Nine Mile Road and part of State Highway 6 along Scout Lodge Straight between Island Creek and Windy Point at the mouth of the Lower Buller Gorge.

The road formation will have a 7m wide unsealed carriageway (currently the standard width of a State Highway) with at least 7 passing bays at approximately 1km intervals (see appended sheets 2 of 15 and 13 of 15). The gradient will be a consistent 1 in 10 grade. The hillside batters will be stabilised. Stabilisation treatment systems are available and designed to hold the soil intact while the vegetation re-establishes (see appended sheet 15 of 15 for examples and clarification where Maccaferri Geoweb has been used around the Beaumont Bridge near Manukau City).

The non-hillside margin will have a bund and the existing native trees will be preserved to act as a shield and slope stabilisation measure (see appended sheet 14 of 15). The road crossfall will not have the typical crown in the centreline with symmetrical 3% crossfall either side. Instead, the 3% crossfall will be designed across the width of the whole carriageway to fall to the water table running along the hillside of the haul road. The intention is to channel any run-off from rain and associated storms away from the non-hillside, fill-batter slopes (see appended sheet 14 of 15).

The access/haul road will be private and restricted to vehicles equipped with Stevenson Mining radio communication. This means that traffic movements can be monitored and controlled carefully. The intention is to not have opposing traffic trying to occupy the same 7m wide carriageway at any one time. Traffic going up will pull into the passing bays while the traffic (e.g. loaded coal trucks) coming down the hill pass by. The intention of the mine owner is to have traffic on the road during daylight hours only so that visual effects from night lighting etc. are minimised. The road is to be a private road, not a public one, in order to ensure that only authorised traffic and people would be using the road at any time.

The access/haul road (number 3) route has been routed so that it does not cross into any catchment feeding water into the Westport town supply. Appended sheet 1 of 15 and sheet 2 of 15 show in plan view how the nearest creek (Jones Creek) is still well separated from the reservoirs and intake that are under the jurisdiction of the Buller District Council.

Several streams and watercourses will need to be crossed. The 50 year flood flows to be calculated will dictate the type of structure required to accommodate bed load and flood debris. Smaller streams will be piped culverts up to 1m diameter (see appended sheet 8 of 15).

Some of the streams are steep and show evidence of logs and rocks being brought down in recent floods. Those streams will either be bridged with single lane bridges similar to those shown on appended sheets 9, 11 and 12 of 15 or, where the creek is too dynamic and the bed load from logs etc. is too unpredictable, a concrete over-flow ford with underlying culverts (for normal flows) will be constructed similar to the one shown on appended sheet 10 of 15.

Route 2 - Discarded

A second option that was studied involved the possibility of a haul road beginning from near Westport from Sergeants Hill and utilising the existing Waterworks Road which already runs up onto Caledonian Terrace. The road already passes alongside the town water supply reservoirs, reaching an elevation of approximately 200m a.s.l. An appropriate grade following along the east side of the ridge between Orowaiti River and the headwaters of German Gully and Ballarat Creek was surveyed and traversed both on foot and by helicopter. By following the east side of the ridge, the visibility of the roadline would be largely shielded from Westport and its surrounds. However, the risk of contaminating the town water supply intake in the Orowaiti River catchment (see appended sheet 1 of 15 "Proposed Waterworks Route 2"), was significant. If any roadside batters started to slip, there

was a risk (too great to accept) of gravels and eroded material contaminating the creek that forms the current intake to the tunnel system of the town's only water supply.

Route 1 - Discarded

The first option explored was to have a haul road (see appended sheet 1 of 15 "Proposed Te Kuha Route 1") following a wide ridgeline in a corridor from Te Kuha zig-zagging around large trees and in a more or less straight line up the hill. This option was discarded because it was not going to be possible to construct a road that met pre-decided visual impact parameters (refer (i) above) and because of the significant number of large rimu and native trees that would be affected. The direct straight-line nature of the unavoidably-wide corridor made it impossible to shield the road behind trees and ridges to an acceptable standard. Combined with the zig-zag route inside this corridor, the road would not have been suitable or appropriate for a haul road for coal trucks and trailer units.

Appendix A

Prepared by Chris J. Coll Surveying Ltd for
Stevenson Mining Ltd

Private Bag 94000

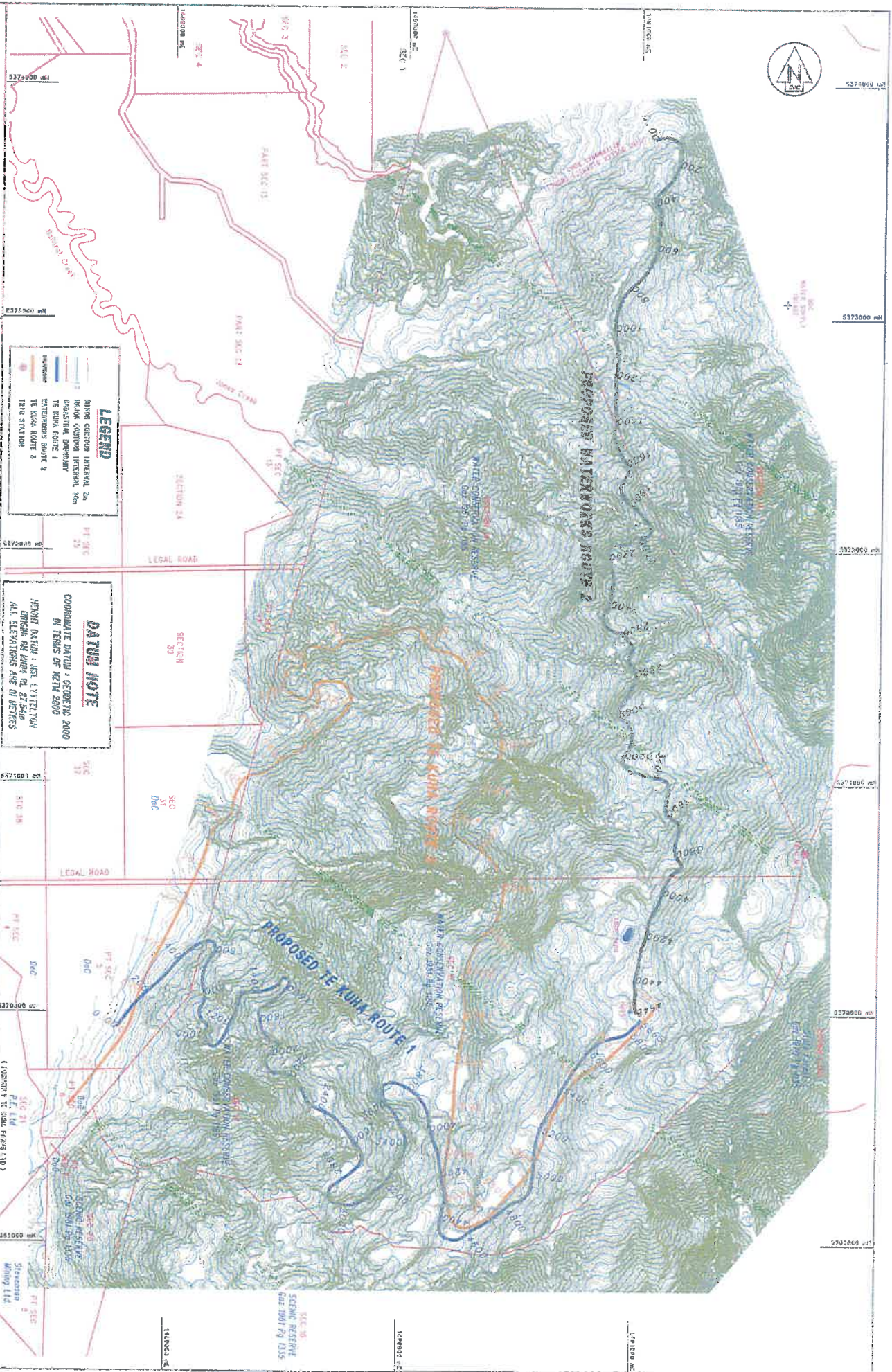
Manukau City

Auckland



STEVENSON

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Licensed Cadastral Surveyor, Resource Management Consultancy
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Email: c.j.coll@cjcoll.co.nz



Prepared for:
STEVENSON MINING LTD.

LEGEND

	50M CONTOUR INTERVAL, 2m
	10M CONTOUR INTERVAL, 10m
	CLUSTER, BOUNDARY
	TE KUNA ROUTE 1
	WATERWORKS ROUTE 2
	TE KUNA ROUTE 3
	TRM SYMBOI

DATUM NOTE

COORDINATE DATUM : GEODETIC 2000
IN TERMS OF NZTM 2000

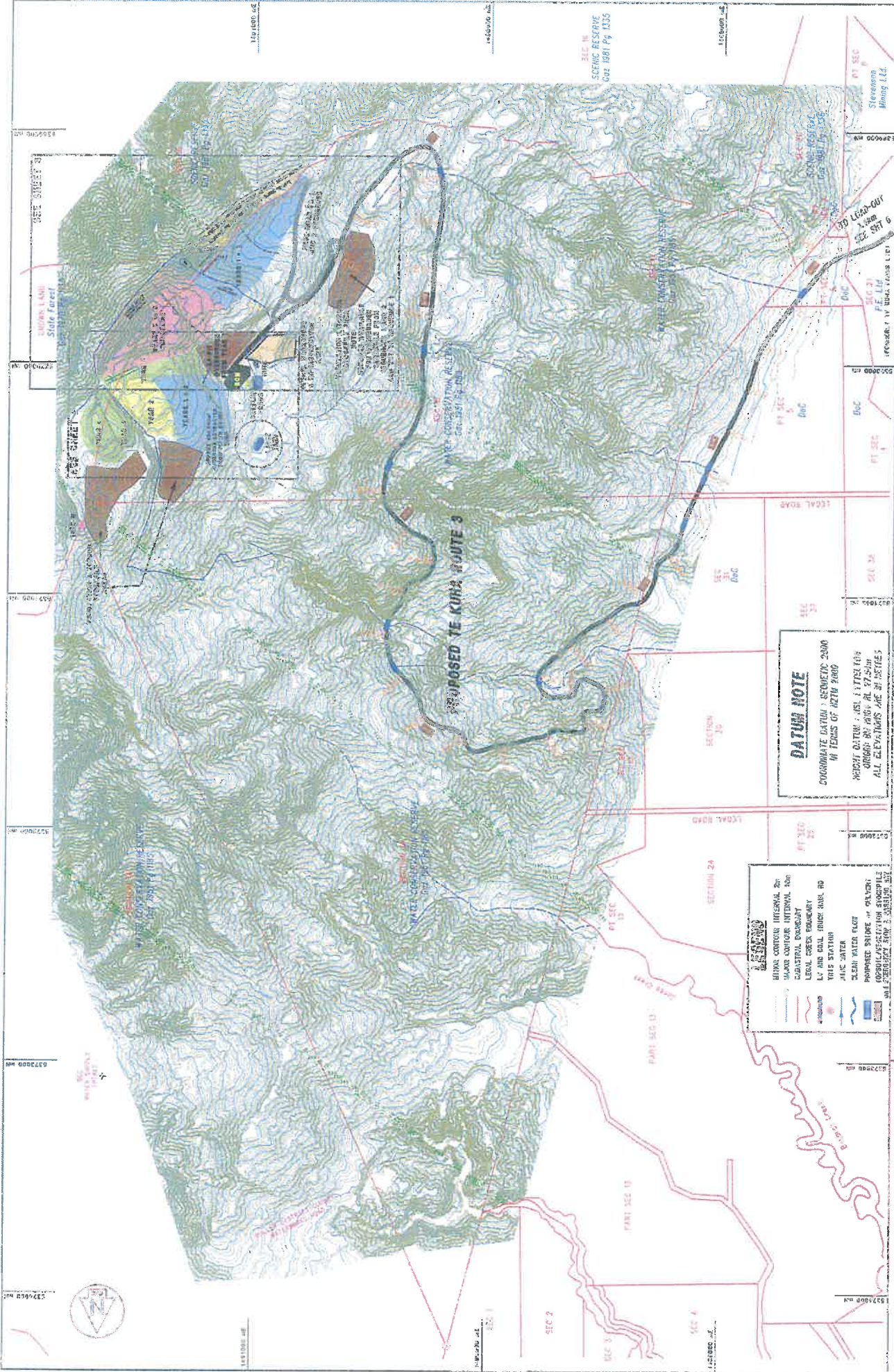
HORIZONTAL DATUM : NZL 1972/73
ORIGIN : 1972/73
ALL ELEVATIONS ARE IN METRES

**VARIOUS PROPOSED ACCESS ROUTES FROM WATERWORKS AND TE KUNA
(PREFERRED ROUTE BEING ROUTE 3)**

CHRIS J COLL SURVEYING LTD.
Registered Land Surveyors, Resource Management Consultant
18 BROUGHTON STREET PO BOX 204 WESTPORT

DATE: 27/04/2011
SCALE: 1:25,000 (A3)
FIG.000 (A3)

1



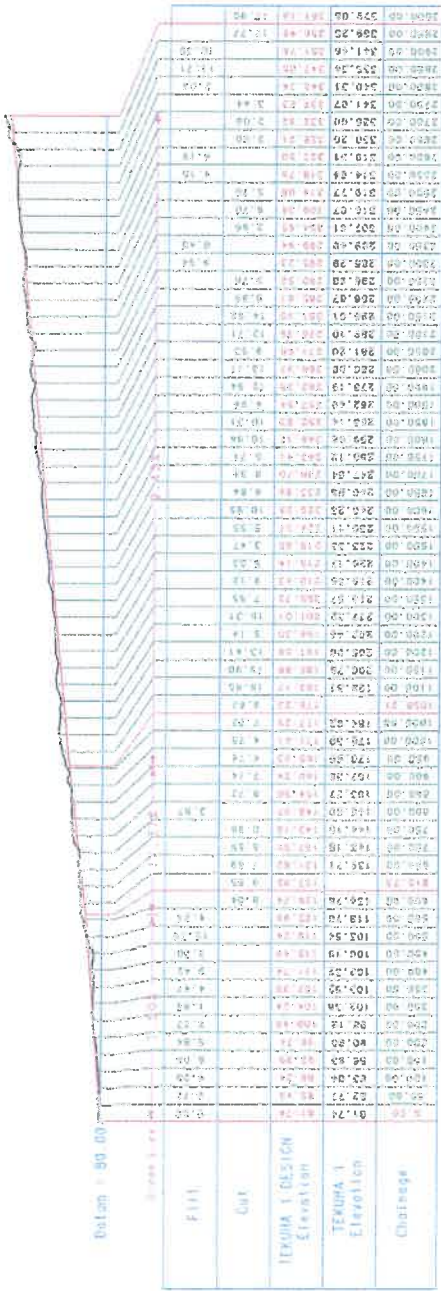
Prepared for:

STEVENSON MINING LTD.

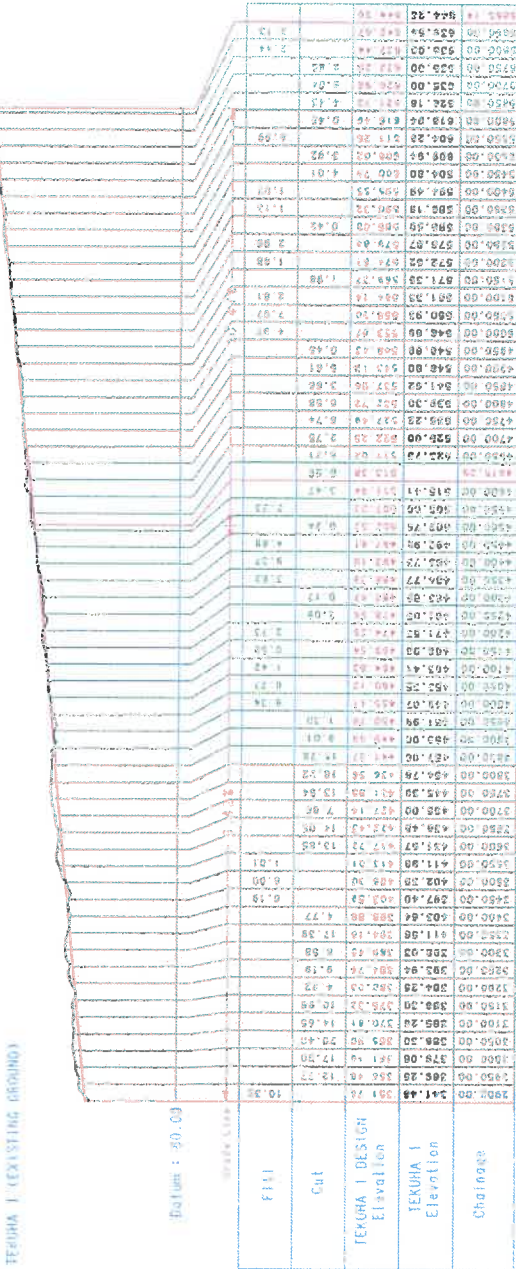
PROPOSED MINE PLAN LAYOUT AND PROPOSED 13 ACCESS ROUTE FROM TE KURA

CHRIS J COLL SURVEYING LTD.
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 19 BONDINGHAM STREET PO BOX 204 WESTPORT
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 SCALE: 1:50,000 (A1)
 DATE: 15/05/2013

SHEET 2 OF 19



Horizontal Scale 1 : 7500
 Vertical Scale 1 : 7500
 TEKURA 1 DESIGN
 TEKURA 1 EXISTING GROUND



Horizontal Scale 1 : 7500
 Vertical Scale 1 : 7500
 TEKURA 1 DESIGN
 TEKURA 1 EXISTING GROUND

CHRIS J COLL SURVEYING LTD.
 Registered Land Surveyor - Resource Management Consultant
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 SCALE: 1:7,500 (A1)
 \$15,000 (A3)

DATE: APRIL 2014
 DRAWN: WARREN REIDHAM
 CHECKED: CHRIS J COLL
 REF: 3787 ACCESS ROUTES L.S.

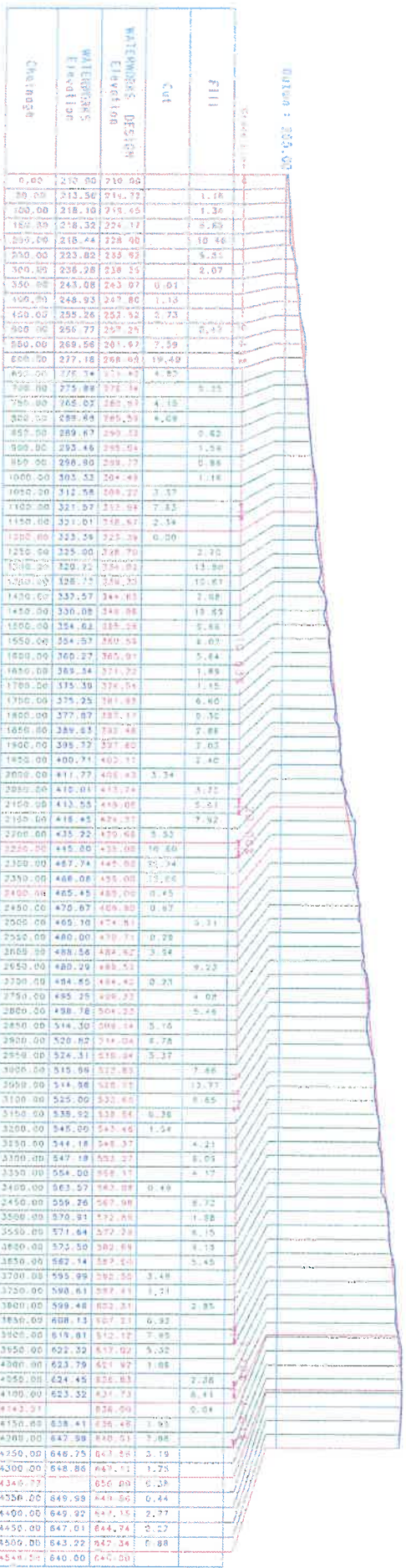
PROJECT: 3
 SHEET 3 OF 15

PROPOSED ACCESS ROUTE 1 FROM TE KUNA
 (DISCARDED)

Prepared for:
STEVENSON MINING LTD.

0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180 190 200

HORIZONTAL SCALE 1 : 7500
 VERTICAL SCALE 1 : 7500
 WATERWORKS DESIGN
 WATERWORKS EXISTING GROUND



Station	Waterworks Elevation	Waterworks Design Elevation	Cut
640.00	210.00	210.00	
640.00	213.36	214.32	1.18
640.00	218.10	219.05	1.36
640.00	218.52	224.17	6.65
640.00	218.44	228.90	10.46
640.00	223.82	233.63	9.81
640.00	226.28	236.15	2.07
640.00	243.08	243.07	0.01
640.00	248.93	247.80	1.13
640.00	255.26	252.52	2.73
640.00	256.77	257.21	0.44
640.00	269.56	261.67	7.89
640.00	277.18	268.60	19.49
640.00	276.34	271.43	4.91
640.00	275.89	272.14	3.75
640.00	265.07	262.91	2.16
640.00	289.64	285.59	4.05
640.00	289.67	289.53	0.14
640.00	293.46	288.04	5.42
640.00	296.80	289.77	7.03
640.00	303.53	304.49	-0.96
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640.00	321.57	312.64	2.93
640.00	321.01	318.67	2.34
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640.00	335.00	328.70	6.30
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640.00	328.75	328.33	0.42
640.00	337.57	344.61	-7.04
640.00	330.08	348.88	-18.80
640.00	324.61	354.29	-29.68
640.00	324.57	360.54	-35.97
640.00	360.27	365.91	-5.64
640.00	369.34	371.22	-11.88
640.00	375.30	374.54	0.76
640.00	375.25	381.87	-6.62
640.00	377.87	387.19	-9.32
640.00	389.43	393.44	-4.01
640.00	398.72	397.60	1.12
640.00	400.71	402.77	-2.06
640.00	411.77	408.43	3.34
640.00	410.01	415.24	-5.23
640.00	413.55	419.08	-5.53
640.00	416.45	424.31	-7.86
640.00	435.22	429.48	5.74
640.00	445.00	435.08	9.92
640.00	467.74	445.08	22.66
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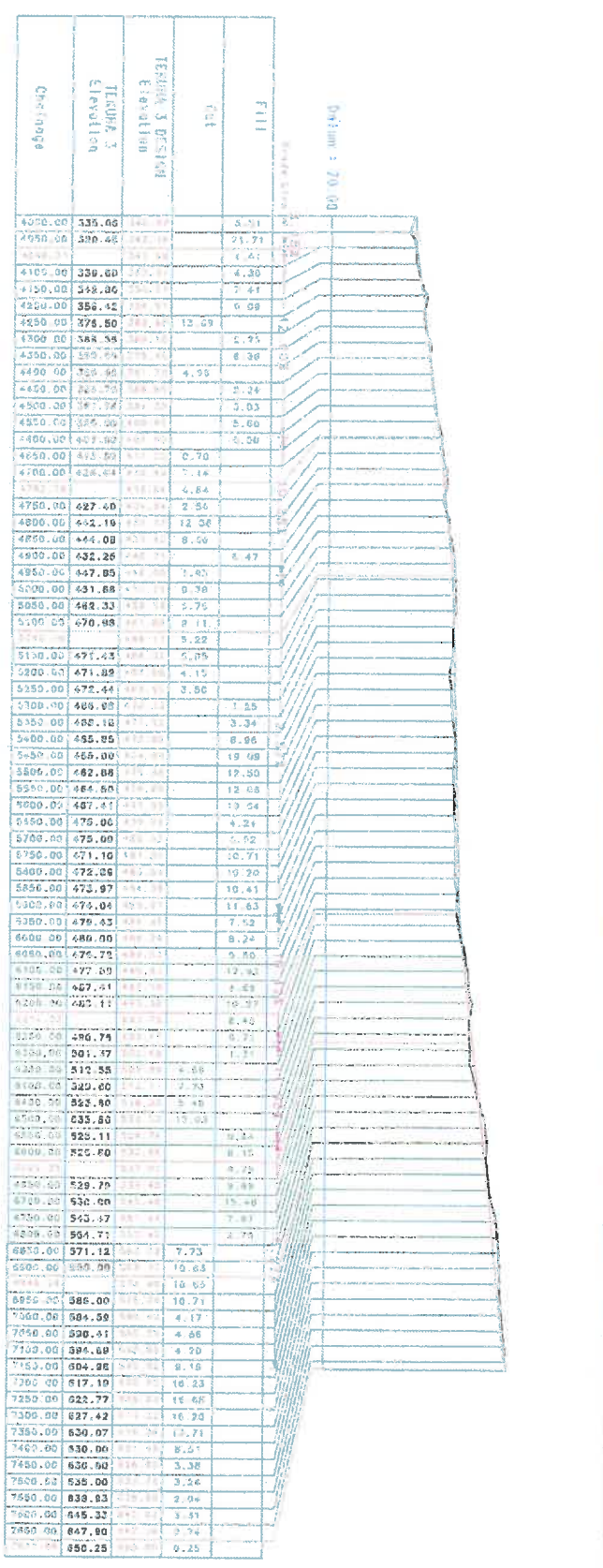
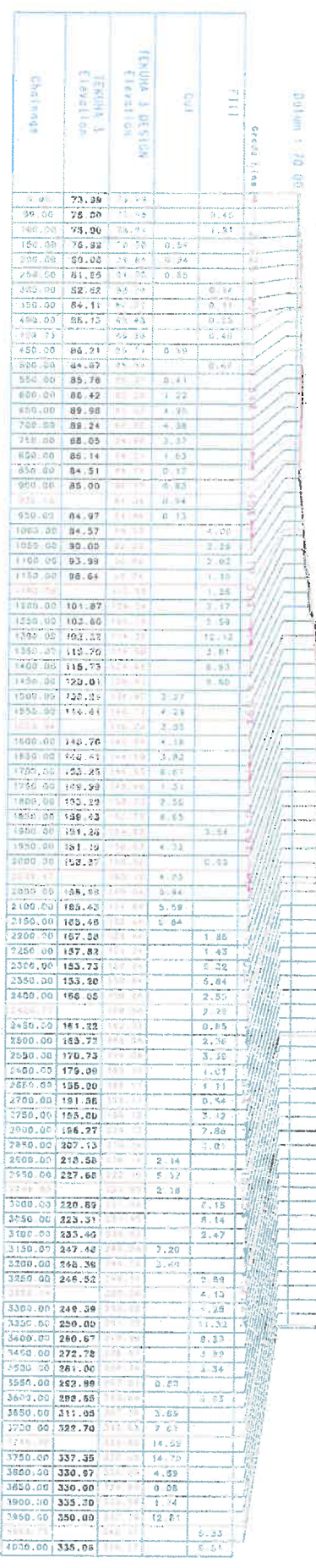
Prepared for:
STEVENSON MINING LTD.

**PROPOSED ACCESS ROUTE 2 FROM WATERWORKS
 (DISCARDED)**

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 PHONE: 03 542 2222 FAX: 03 542 2222
 EMAIL: CHRIS@CJSURVING.CO.NZ
 REF: 2010 ACCESS ROUTES LS
 SCALE: 1:25,000 (A1)
 DATE: 17/5/2010 (2.31)
 SHEET 4 OF 8

SEE SHEET 4 -
 JOINS 2000 FROM
 TENUKA 2000 HANDLING
 AND RAIL STATIONS SITE

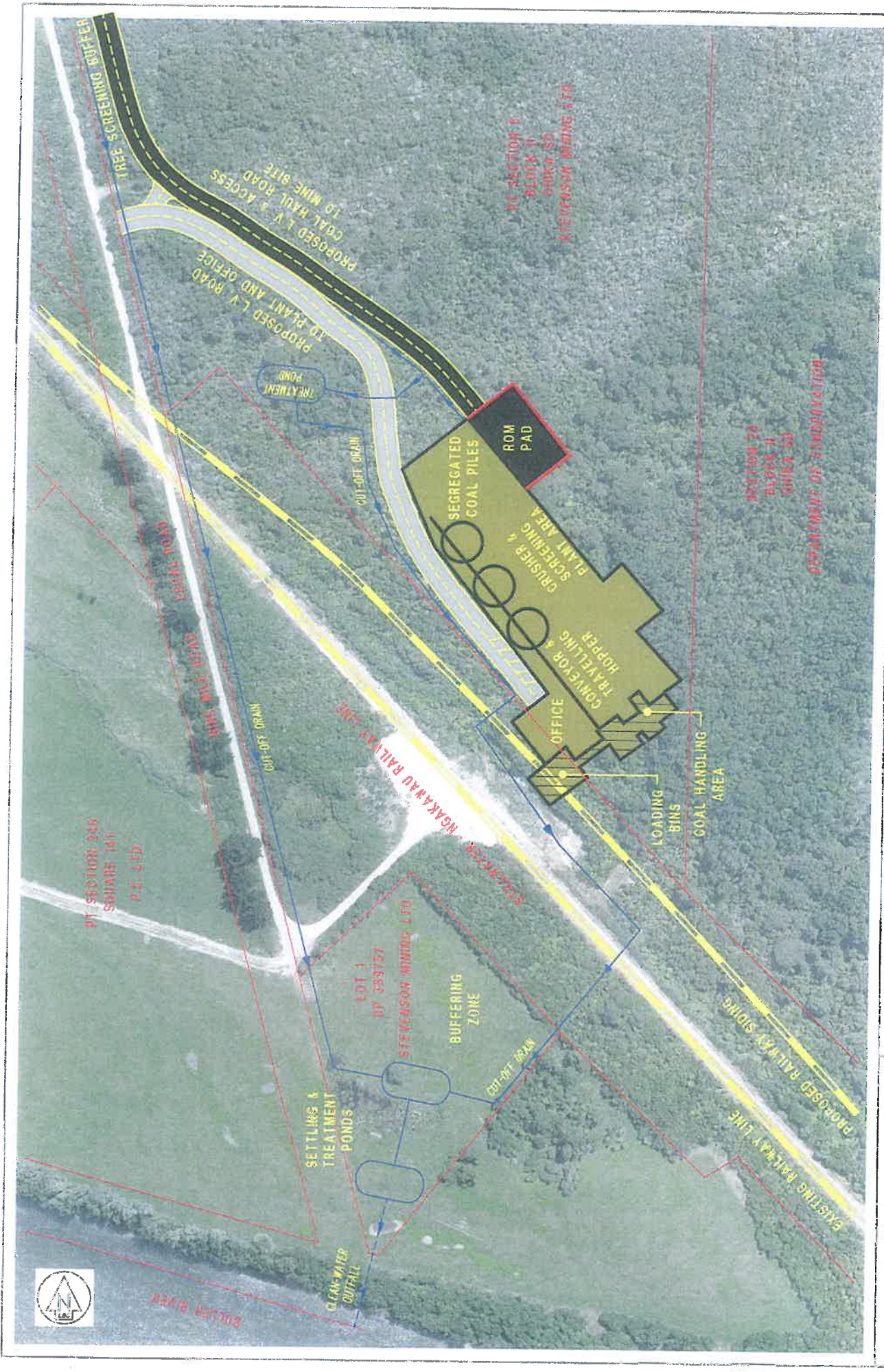
Horizontal Scale 1 : 2000
 Vertical Scale 1 : 1000
 TENUKA 2 DESIGN
 EXISTING GROUND



Prepared for:
STEVENSON MINING LTD.

PREFERRED PROPOSED ACCESS ROUTE 3 FROM TE KUNA TO RINE-SITE OVER PUBLIC LAND

CHRIS J COLL SURVEYING LTD.
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 19 BROUGHAM STREET, PO BOX 204, WESTPORT
 PHONE: 03 752 5000 (4/1)
 FAX: 03 752 5000 (4/3)
 SHEET 5 OF 8



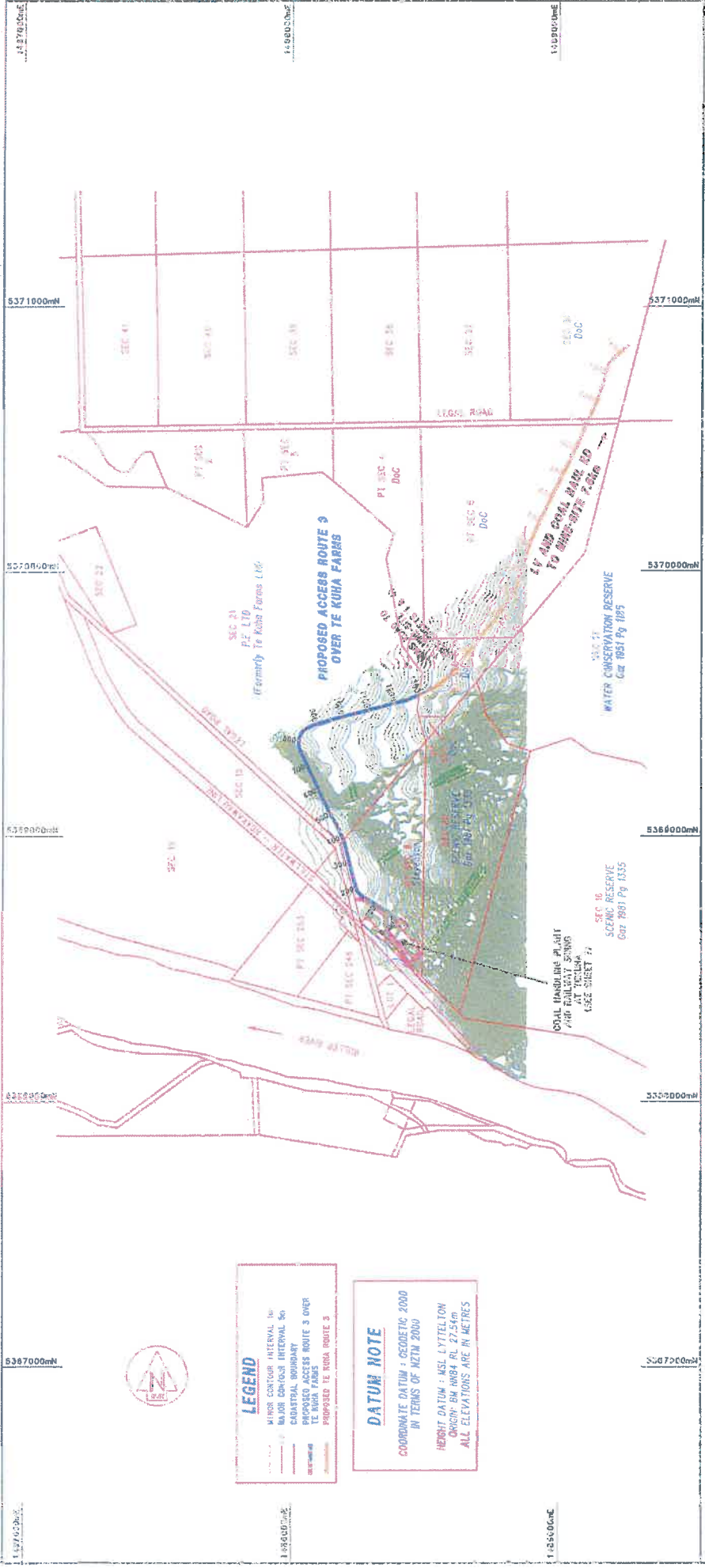
CHRIS J COLL SURVEYING LTD.
 Regd Land Surveying, Resource Management Consultant
 10 BROUGHTON STREET PO BOX 204 WESTPORT

DATE	NOV 2012	SCALE	1:500 (A3)
DRAWN	LANDS COLL	PROJECT	NET 2207 TP AREA MANGAPARE SITE

Prepared for: **STEVENSON MINING LTD.**

PROPOSED FOOTPRINT OF RAILWAY SIDINGS AND COAL HANDLING SITE
STEVENSON TE KUHA MINE
OCTOBER 2013

SHEET **7** OF 10



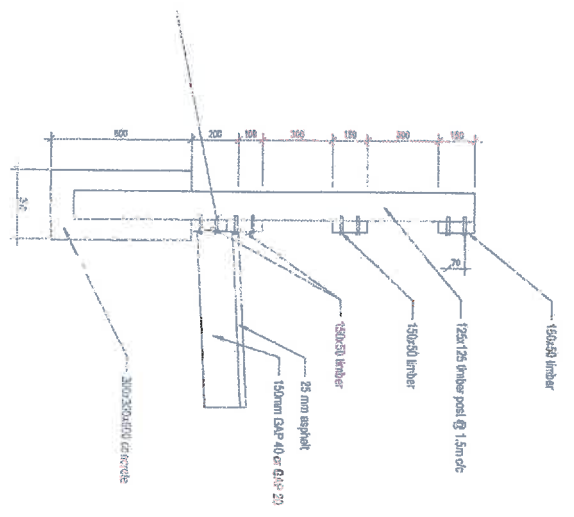
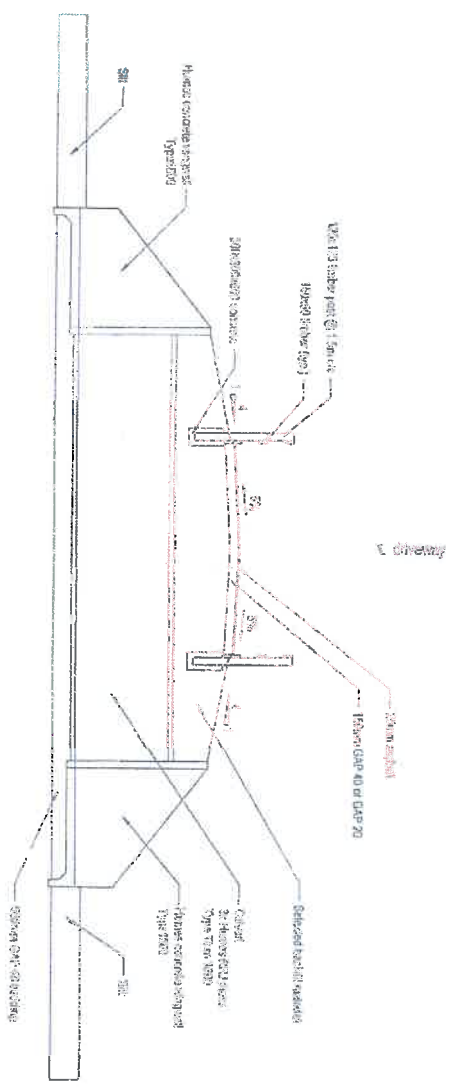
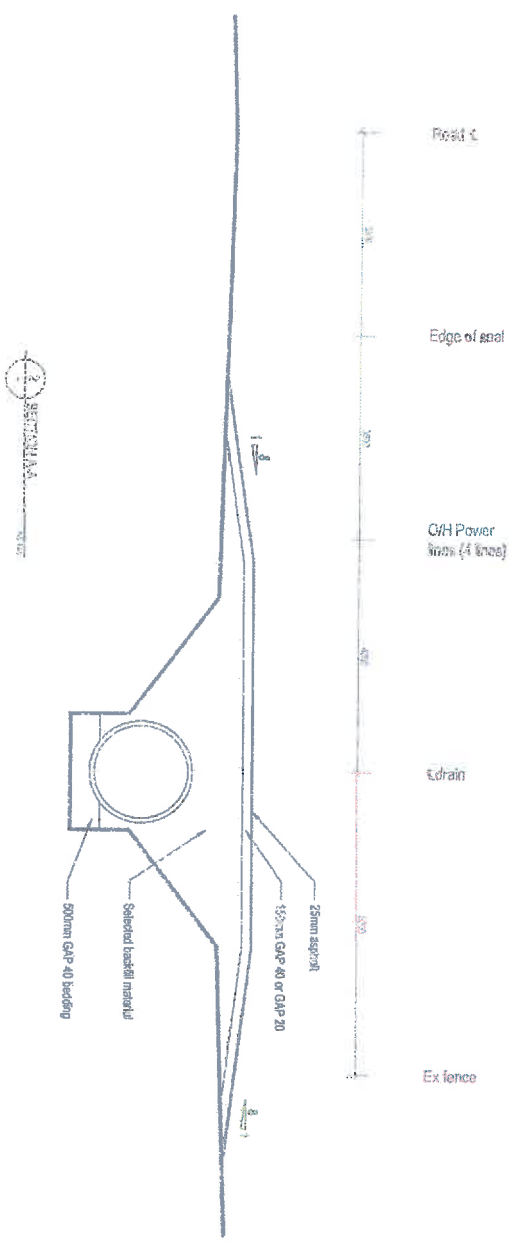
Bottom : 18.00

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0+10	17.60	17.60	0.00
0+15	17.40	17.40	0.00
0+20	17.20	17.20	0.00
0+25	17.00	17.00	0.00
0+30	16.80	16.80	0.00
0+35	16.60	16.60	0.00
0+40	16.40	16.40	0.00
0+45	16.20	16.20	0.00
0+50	16.00	16.00	0.00
0+55	15.80	15.80	0.00
0+60	15.60	15.60	0.00
0+65	15.40	15.40	0.00
0+70	15.20	15.20	0.00
0+75	15.00	15.00	0.00
0+80	14.80	14.80	0.00
0+85	14.60	14.60	0.00
0+90	14.40	14.40	0.00
0+95	14.20	14.20	0.00
1+00	14.00	14.00	0.00

Horizontal Scale 1 : 7500
 Vertical Scale 1 : 7500
 TEKURA 3 DESIGN
 EXISTING GROUND

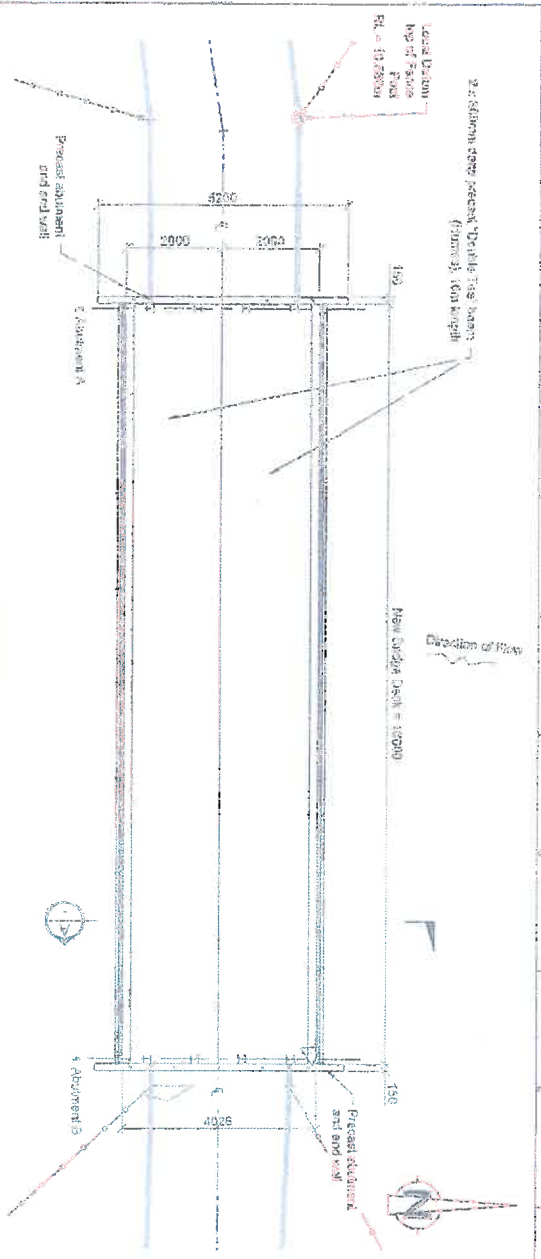
LEGEND
 MAJOR CONTOUR INTERVAL 10
 MAJOR CONTOUR INTERVAL 50
 CADASTRAL BOUNDARY
 PROPOSED ACCESS ROUTE 3 OVER TE KAHU FARMS
 PROPOSED TE KAHU ROUTE 3

DATUM NOTE
 COORDINATE DATUM : GEODETIC 2000
 IN TERMS OF NZTN 2000
 HEIGHT DATUM : ASL LYTELTON
 ORIGIN: BM HWB4 RL 27.54m
 ALL ELEVATIONS ARE IN METRES

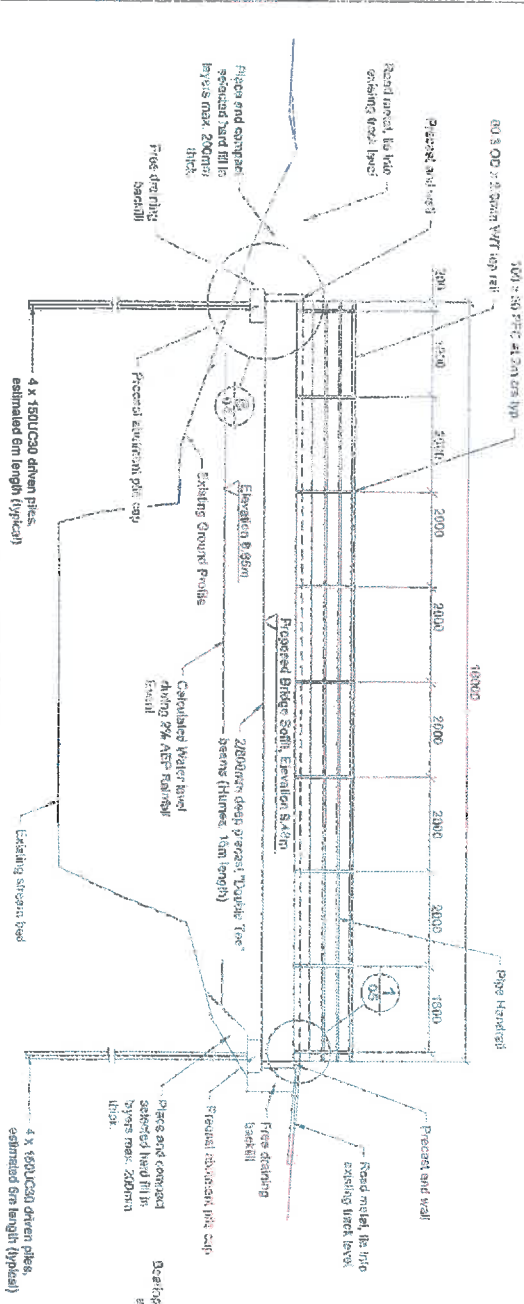


ISSUE FOR CONSTRUCTION

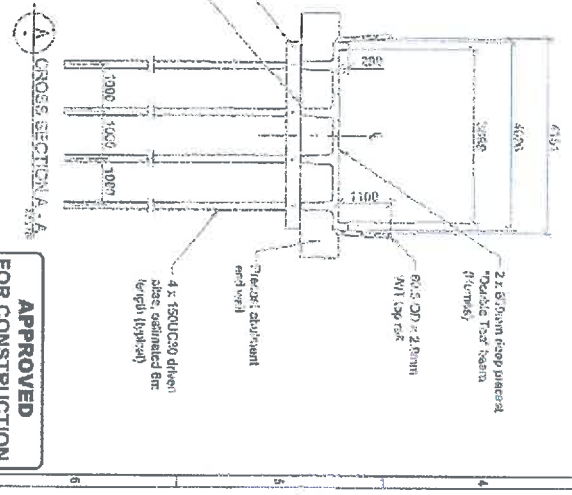
Drawn: DJR	Rev: A	Issue for construction	18 Oct 12	18 Oct 12	145 The Strand, Tamworth PO Box 12000, Tamworth 3177 Phone: 07 877 5000 Web: www.walton.co.nz	103 Ballard Road Gawlerham	Sections and handrail detail	13075 - b	Scale: As Shown
Checked: DJR	Rev: A	Issue for construction	18 Oct 12	18 Oct 12	145 The Strand, Tamworth PO Box 12000, Tamworth 3177 Phone: 07 877 5000 Web: www.walton.co.nz	103 Ballard Road Gawlerham	Sections and handrail detail	13075 - b	Scale: As Shown
Designed: DJR	Rev: A	Issue for construction	18 Oct 12	18 Oct 12	145 The Strand, Tamworth PO Box 12000, Tamworth 3177 Phone: 07 877 5000 Web: www.walton.co.nz	103 Ballard Road Gawlerham	Sections and handrail detail	13075 - b	Scale: As Shown
Approved: DJR	Rev: A	Issue for construction	18 Oct 12	18 Oct 12	145 The Strand, Tamworth PO Box 12000, Tamworth 3177 Phone: 07 877 5000 Web: www.walton.co.nz	103 Ballard Road Gawlerham	Sections and handrail detail	13075 - b	Scale: As Shown



PLAN
Scale 1:100 on A3

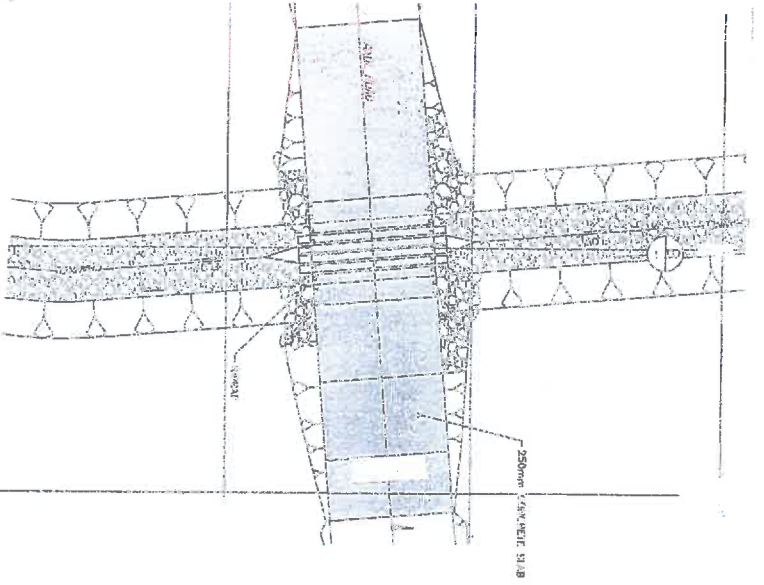


LONGSECTION
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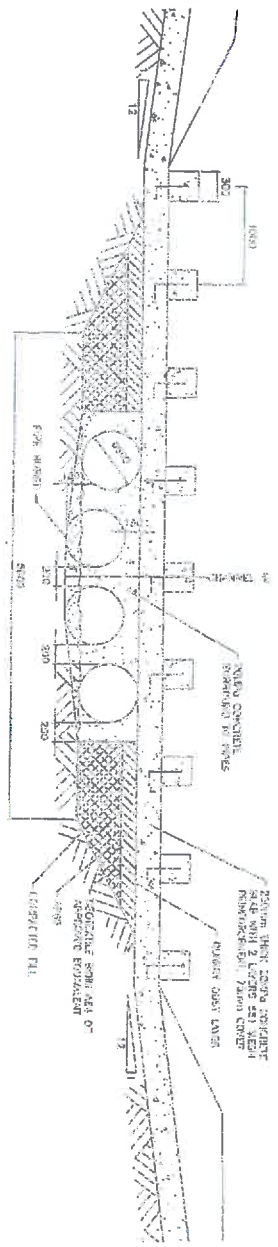


APPROVED FOR CONSTRUCTION

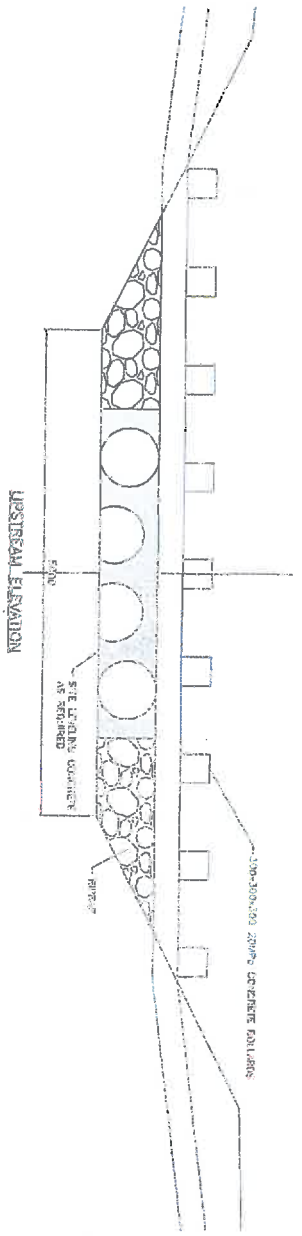
Surveyor:	A		13233	Scale (AS Original):	1:100
Designer:	A		13233	Sheet #:	2
Drawn:	A		13233	Sheet #:	2
Reviewed:	A		13233	Sheet #:	2
Date:	01.10.2018	Date:	01.10.2018	Sheet #:	2
Client:	STEVENSON MINING LTD.				
Project:	11 OMAHU ROAD AREA RICHARDSON BRIDGE				
Drawn:	13233				
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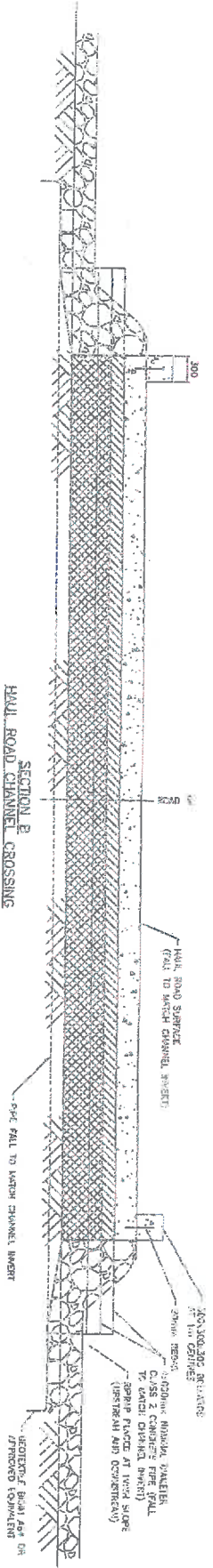
HAUL ROAD CHANNEL CROSSING PLAN



SECTION A
HAUL ROAD CHANNEL CROSSING



UPSTREAM ELEVATION



SECTION B
HAUL ROAD CHANNEL CROSSING

Formation width 7 metres
Ford is Diagrammatic only and not to scale

NOTE:
See Sheet E-100000

Prepared for:
STEVENSON MINING LTD.


TYPICAL CONCRETE FORD AND CULVERT
STEVENSON TE KUHA LIGHT VEHICLE & COAL HAUL ROAD
COPYRIGHT OF TIAKI ENGINEERING CONSULTANTS AND BRIDGE IT NZI

	Chris J. Cole Surveying Ltd. Road Land Surveyor, Resource Management Consultant 18 BRIDGMAN STREET PO BOX 207 WESTPORT TAIAPU	SHEET 10
	Date: 2012 Drawn: [Name] Checked: [Name] Scale: 1:5	SHEET 10 OF 15



Prepared for:
STEVENSON MINING LTD.

TYPICAL BRIDGE
STEVENSON TE KURA LIGHT VEHICLE & COAL HAUL ROAD
(COPYRIGHT) OF TAKI ENGINEERING CONSULTANTS AND BRIDGE (T NZ)

		CHRIS J COLL SURVEYING LTD. Regd Land Surveyor, Resource Management Consultant 19 BROUGHAM STREET PO BOX 204 WESTPORT	
DRAWN CHRIS COLL	CHECKED LAURA COLL	SCALE AS SHOWN	DATE APRIL 2018
REF: 2707 TE KURA HAUL RD		1377 BRIDGEWAY	SHEET 11 OF 21



Prepared for:
STEVENSON MINING LTD.

TYPICAL BRIDGE
STEVENSON TE KUHA LIGHT VEHICLE & COAL HAUL ROAD
(COPYRIGHT OF TIAKI ENGINEERING CONSULTANTS AND BRIDGE 'T' NZI)

	CHRIS J COLL SURVEYING LTD. Regd Land Surveyor, Resource Management Consultant 19 BROUGHAM STREET PO BOX 204 WESTPORT			
	BRAND APRIL 2004	DWG NO. 2004	DISEGNER LARRY SOUL	CHECKER 2703 TE KUHA WALK LTD
DATE	SCALE	NOT APPLICABLE	SHEET	

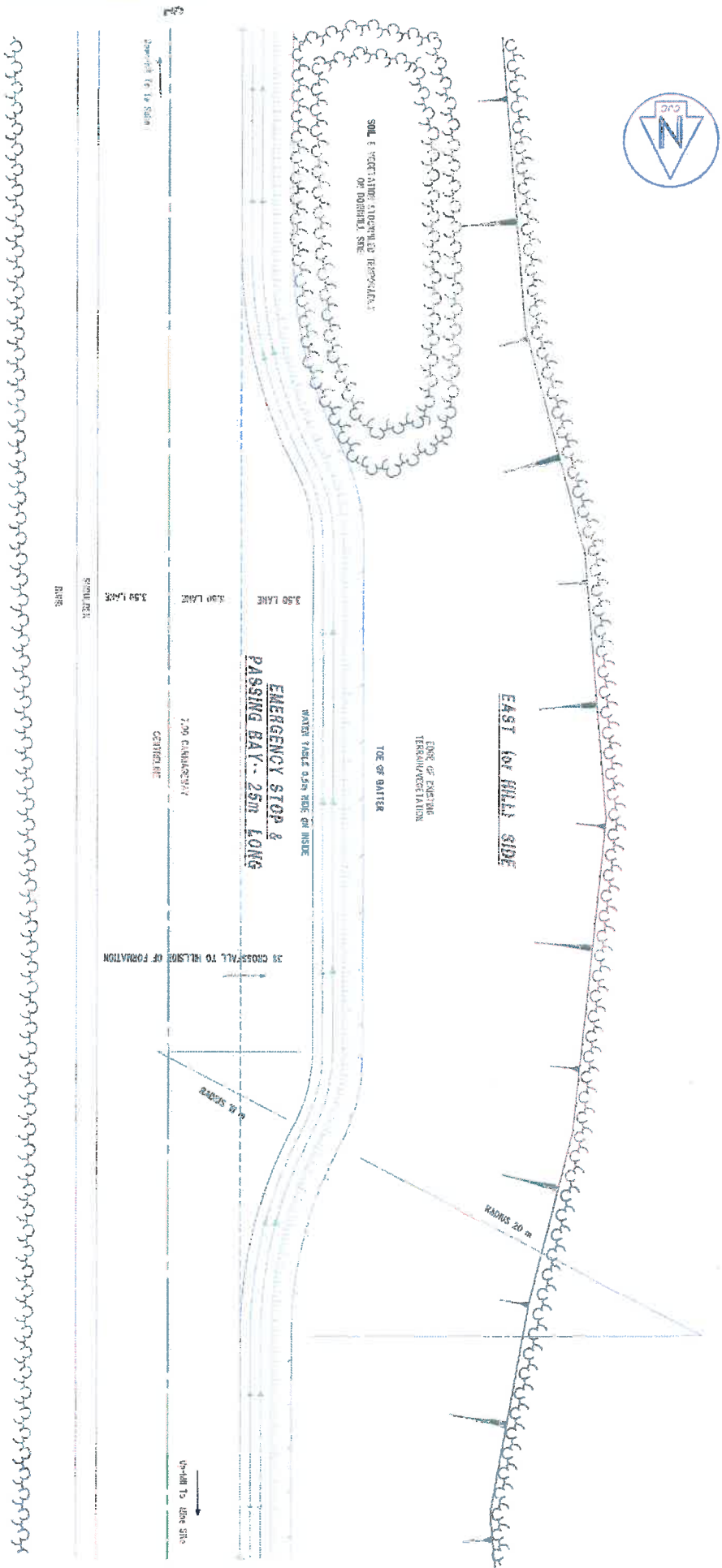


OR AS APPLICABLE



NOTE:
1) Not responsible for road section changes shown on plans.
2) Where shown on plans, any and all details shall refer to the
drawings and specifications of the contract and to the drawings of the
contract and to the drawings of the contract and to the drawings of the contract.

NOTE:

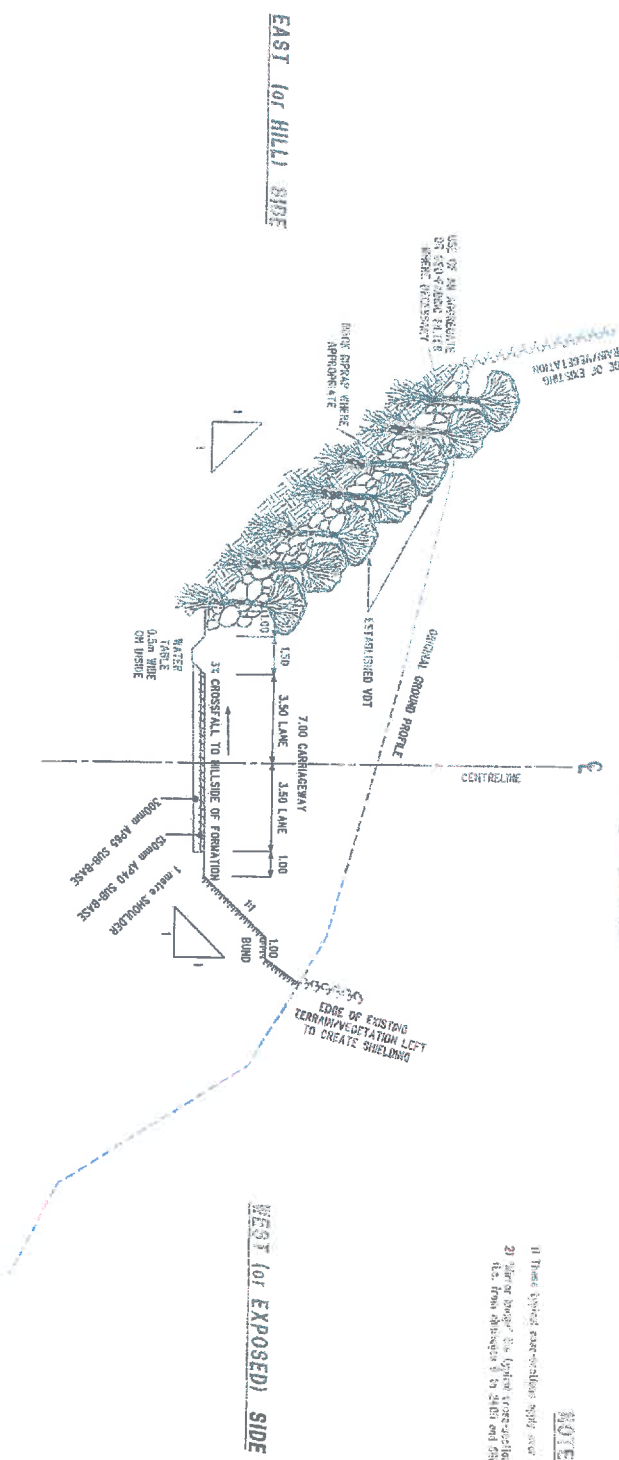


Prepared for:
STEVENSON MINING LTD.

**TYPICAL EMERGENCY STOP & PASSING BAY & TEMPORARY STOCKPILE AREA
STEVENSON TE KUHA LIGHT VEHICLE & COAL HAUL ROAD**

	CHRIS J. COLE SURVEYING LTD.			
	Regd. Land Surveyor, Resource Management Consultant 19 BROUGHAM STREET PO BOX 204 WESTPORT			
DATE:	APRIL 2011	DRAWN BY:	LADIA COLE	SCALE:
		CHECKED BY:	LADIA COLE	SCALE:
		REF:	2727 TE KUHA A SECTION	1:500 (A3)
SHEET:	13	OF:	15	

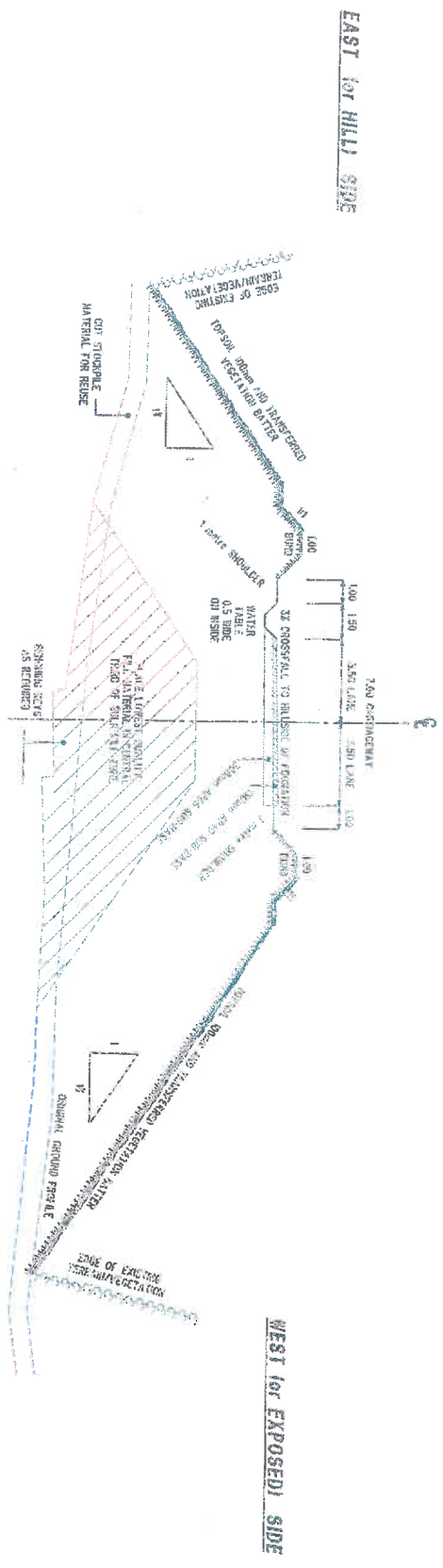
TYPICAL CROSS SECTION IN CUT



NOTE:

- 1) These typical cross-sections apply to road sections elsewhere 2500 to 6500.
- 2) Slope of bank on either side of road should be 1:1.
- 3) The top of the road should be 1:1.

TYPICAL CROSS SECTION IN FILL



Prepared for:
STEVENSON MINING LTD.

TYPICAL CROSS SECTIONS
STEVENSON TE KUIHA LIGHT VEHICLE & COAL HAUL ROAD

DATE	APRIL 2004	CHECKED	LANEY DICK	SCALE	AS SHOWN	SHEET	14
<p>CHRIS J. COLL SURVEYING LTD. 19 BRIDGEMAN STREET PO BOX 204 WESTPORT Resource Management Consultant</p>							



MACCAFERRI GEOWEB - BEAUMONT BRIDGE, MANAKAU CITY
http://www.maccferri.com.au/files/Maccaferridemo/04%20beam%20bridge%20steel%20road%20bridge.pdf



MACCAFERRI GEOWEB - BEAUMONT BRIDGE, MANAKAU CITY
http://www.maccferri.com.au/files/Maccaferridemo/04%20beam%20bridge%20steel%20road%20bridge.pdf



GEOWEB ACTIVE SLOPE STABILISATION SYSTEMS
http://www.geoweb.com.au/files/Geoweb%20active%20slope%20stabilisation%20systems.pdf

Prepared for:
STEVENSON MINING LTD.

EXAMPLES OF ACCELERATED BATTER SLOPE TREATMENT THAT
 ARE PROPOSED FOR THE L.V. AND ACCESS COAL HAUL ROAD
 FROM TE KUHA RAILWAY SIDING TO THE MINE SITE

	CHRIS J. COLE SURVEYING LTD. Registered Surveyors, Resource Management Consultant 19 DRUGGISHAM STREET PO BOX 204 WESTPORT		SHEET 15 SHEET 10 OF 18
	DRAWN DATE	CHECKED DATE	

Appendix B

Prepared by Chris J. Coll Surveying Ltd for
Stevenson Mining Ltd

Private Bag 94000

Manukau City

Auckland



STEVENSON

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ASSESSMENT OF THE ECONOMIC EFFECTS OF THE TE KUHA MINE PROJECT

**Mike Copeland
Brown, Copeland & Co Ltd**

**Prepared for
Stevenson Mining Ltd**

14 April, 2014

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1. INTRODUCTION

Background to the Project

- 1.1** Te Kuha Limited Partnership (TKLP) is a joint venture between Stevenson Group Limited (Stevenson) and Wi Pere Holdings Limited (Wi Pere), who hold Mining Permit 41-289, which covers the area known as the Te Kuha Deposit located on top of the Paparoa Ranges, approximately 12 kilometres south east of Westport in the Buller District. Stevenson is responsible for obtaining all necessary approvals for the Te Kuha Mine Project (the Project) including land access agreements and resource consents.
- 1.2** The Te Kuha Deposit is predominantly located on an area of Buller District Council (BDC) water conservation reserve with a small area (approximately 13 hectares) on Department of Conservation (DOC) 'stewardship' land. It is anticipated that the Project will involve the recovery of around 4 million tonnes of high grade coal over a mine life of 16 years – i.e. 250,000 tonnes will be mined per annum. Prior to coal recovery, there will be a 12 month construction phase. At the end of the mine's life there will be a 1 to 2 year land rehabilitation phase.

Report Objective and Format

- 1.3** The objective of this report is to provide an assessment of the economic effects of the proposed Te Kuha Mine Project. The report is divided into six parts (in addition to this introductory section). These cover:
- (a) The relevance of economic effects under and the Resource Management Act 1991 (RMA) and the Crown Minerals Act (CMA);
 - (b) The key economic drivers of the Buller District and West Coast regional economies;
 - (c) The local district and regional economic effects of the Project during its construction and operation;

- (d) Other economic benefits of the Project;
- (e) Potential economic costs of the Project; and
- (f) The report's conclusions.

2. ECONOMICS, THE RMA AND THE CMA

The RMA - Community Economic Wellbeing

- 2.1 Economic considerations are intertwined with the concept of the sustainable management of natural and physical resources, which is embodied in the RMA. In particular, Part II section 5(2) refers to enabling "*people and communities to provide for their ... economic ... well being*" as a part of the meaning of "*sustainable management*", the promotion of which is the purpose of the RMA.
- 2.2 As well as indicating the relevance of economic effects in considerations under the RMA, this section also refers to "*people and communities*" (emphasis added), which highlights that in assessing the impacts of a proposal it is the impacts on the community and not just the applicant or particular individuals or organisations, that must be taken into account. This is underpinned by the definition of "*environment*" which also extends to include people and communities.

The RMA - Economic Efficiency

- 2.3 Part II section 7(b) of the RMA notes that in achieving the purpose of the Act, all persons "*shall have particular regard to ... the efficient use and development of natural and physical resources*" which include the economic concept of efficiency¹. Economic efficiency can be defined as:

"the effectiveness of resource allocation in the economy as a whole such that outputs of goods and services fully reflect consumer preferences for these goods and services as well

¹ See, for example, in *Marlborough Ridge Ltd v Marlborough District Council* [1998] NZRMA 73, the Court noted that all aspects of efficiency are "*economic*" by definition because economics is about the use of resources generally.

*as individual goods and services being produced at minimum cost through appropriate mixes of factor inputs*².

- 2.4** More generally economic efficiency can be considered in terms of:
- Maximising the value of outputs divided by the cost of inputs;
 - Maximising the value of outputs for a given cost of inputs;
 - Minimising the cost of inputs for a given value of outputs;
 - Improving the utilisation of existing assets; and
 - Minimising waste

The CMA – Net Direct Economic and Other Benefits

- 2.5** The Crown Minerals Act at section 61(2) contains a list of matters which the appropriate Minister must have regard to in considering whether to agree to an access arrangement in respect of Crown land. The Crown Minerals Amendment Act 2013 added to this list:

“(da) the direct net economic and other benefits of the proposed activity in relation to which the access arrangement is sought;”

The Project requires access to DOC land and hence there is a requirement for an assessment of “the direct net economic and other benefits” of the proposed mining activity.

Viewpoint

- 2.6** An essential first step in carrying out an evaluation of the positive and negative economic effects of a development project is to define the appropriate viewpoint that is to be adopted. This helps to define which economic effects are relevant to the analysis. Typically a district or wider regional viewpoint is adopted and sometimes even a nationwide viewpoint might be considered appropriate.

² Pass, Christopher and Lowes, Bryan, 1993, *Collins Dictionary of Economics* (2nd edition), Harper Collins, page 148.

- 2.7** For the Te Kuha Mine Project, it is appropriate to consider Buller District and West Coast Regional economic viewpoints given that the most significant economic impacts will be on local residents and businesses. However in terms of economic efficiency effects, the project generates district, regional and national economic benefits. In particular at the national level the Project will contribute royalty and other payments to the Government.
- 2.8** There are also private or financial costs and benefits associated with the proposed activities. If the access to Crown land and resource consents granted, and the joint venture partners give effect to these, then it can be assumed that the private or financial costs and benefits have been responsibly and properly analysed and that from the viewpoint of those with money at risk, the expected financial benefits exceed the expected costs. Accountability for accuracy of the financial analysis clearly rests with the joint venture partners and ultimately the net financial benefits they might receive from the proposal are not directly relevant to the assessment of effects under the RMA and CMA.
- 2.9** Therefore the focus of this report is on the wider economic effects on parties other than the joint venture partners and its customers. Economists refer to such effects as “externalities”³.

Economic Rationale for Land Use Controls

- 2.10** Over the past thirty years or so, there has been a growing acceptance in New Zealand and other countries that economic efficiency is maximised when investment decisions are left to individual entrepreneurs or firms, without intervention from Government. The reason for this is that a perfectly competitive market achieves an efficient allocation of resources. Accordingly, the efficient use of resources (and therefore “sustainable management”) occurs through the creation of a climate where the market enables people to make investment decisions “to provide for their economic well-being”.

³ Defined as the side effects of the production or use of a good or service, which affects third parties, other than just the buyer and seller.

- 2.11** Despite this, markets are not “perfect”, and the presence of “externalities” affects the working of the market and the results that could be expected from a totally unregulated system of resource allocation. Externalities arise because the actions of individuals or firms sometimes create positive or negative impacts on others.
- 2.12** It is also unrealistic to assume that development of particular forms of economic activity and/or the location of that economic activity will avoid the imposition of costs on the community in general. Where the developer, and/or those engaged in the various forms of economic activity at the site do not face the incidence of these costs, externalities arise and intervention of some form may be justified. In other words, the development may create costs or benefits for parties other than those commercially involved in the development.
- 2.13** Externalities may be in the form of environmental effects such as visual, noise, water or air pollution effects. Externalities in an economic context may relate to the provision of infrastructure where a strict user pays system is not in place; to traffic congestion and road accident effects; and to the so called agglomeration economies and public amenity benefits, which relate to the beneficial effects for businesses, customers and residents in concentrating particular forms of economic activity within confined areas.
- 2.14** It is the presence of externalities (economic and non economic) which justify land use constraints because if externalities are not present, the market can be left to itself to optimise resource use efficiency. However the existence of externality costs *per se* does not justify intervention.
- 2.15** Firstly, intervention is not costless in that it prevents a market determined outcome, maximising producer and consumer choice. Preventing the joint venture partners from best meeting the needs of its customers will have economic efficiency costs for the joint venture partners and Government (or taxpayers) as a recipient of royalty

payments. Incurring these costs is only justified if significant economic (or non-economic) externality costs are associated with the proposed Project.⁴

2.16 Secondly, there may be externality benefits from the proposed new mine that outweigh any externality costs which may result from it. Therefore a range of economic externalities (both positive and negative) arising from the proposed Project are discussed later in this report.

3. THE BULLER DISTRICT AND WEST COAST REGIONAL ECONOMIES

3.1 Statistics New Zealand data indicate that the resident population in Buller declined from 10,700 in 1996 to 9,900 in 2001, was steady at around this level through to 2006 and is estimated at 10,050 in 2013, down from 10,150 in 2012.⁵ Statistics New Zealand's medium projection is for the population to have peaked in 2011 and to gradually decline over the remainder of its forecast period out to 2031 at an average rate of -0.5% per annum.⁶

3.2 For the West Coast Region as a whole, the population fell from 33,200 in 1996 to 31,100 in 2001. Since then, the population has increased to 32,100 in 2006 and to an estimated 32,700 in 2013. Statistics New Zealand's medium projection is for the population to grow over the remainder of its projection period out to 2031 at an average rate of 0.1% per annum. This compares with a medium projection average growth rate for New Zealand's total population of 0.8% per annum.

3.3 Employment in the Buller District has increased from 3,130 persons employed in 2000 to 4,940 persons employed in 2013 (i.e. an average growth rate over the

⁴ Granting access to Crown land and resource consents for the Project would not constitute a completely "free market" outcome. It will still be subject to the constraints which already exist in the District and Regional Plans and any additional constraints imposed when access to the Crown land and resource consents are granted. These access and consenting constraints may have the effect of addressing externalities which would otherwise arise. Also the Project operator will be subject to various regulatory constraints other than those imposed under the access agreement and resource consents – for example, occupational safety and health regulations.

⁵ Source: Statistics New Zealand www.stats.govt.nz; NZ.Stat; Sub-national Population Estimates, (last modified 18 December, 2013); 8 April, 2014.

⁶ Source: Statistics New Zealand www.stats.govt.nz; NZ.Stat; Area Unit Population Projections by Territorial Local Authority; 8 April, 2014.

period of 3.5% per annum). For the West Coast region, employment has grown from 11,800 persons employed in 2000 to 15,320 persons employed in 2013 (i.e. an average growth rate over the period of 2.0% per annum). During this same period, employment in New Zealand has grown at an average rate of 1.5% per annum.⁷

- 3.4** The mainstays and major growth sectors for Buller and the West Coast economies are mining, tourism and agriculture⁸. In Buller, mining accounted for 1,150 or 23% of all jobs in 2013. In 2000 there were only 210 mining jobs in the District and this was also the case in 2006. Since 2006, mining jobs in the District have grown at an average rate of 27.5% per annum. For the West Coast, there were 1,320 mining jobs in 2013 or 8.6% of all jobs, although this is down from 1,600 in 2012 reflecting the closures of the Pike River and Spring Creek mines.⁹
- 3.5** Employment in tourism¹⁰ grew rapidly in Buller and on the West Coast between 2000 and 2006, but has since declined. In Buller in 2000 there were 340 jobs in accommodation and food services and this had grown to 530 by 2006. However by 2013 there were only 470 jobs in this sector – i.e. a decline of 11.3%. For the West Coast in 2000, there were 1,440 jobs in accommodation and food services and this had grown to 2,070 by 2006. By 2013, the number had reduced to 1,830, (12.0% of total employment), a decline of 11.6% since 2006.
- 3.6** Similar trends are shown from an analysis of guest nights in commercial premises in Buller and on the West Coast. For Buller, there were 171,920 guest nights recorded for the year ending December 2000. This had risen to 245,686 guest nights for the year ending December 2006 (i.e. a rise of 42.9%). However for the year ending

⁷ Source: Statistics New Zealand www.stats.govt.nz; NZ.Stat; Detailed industry by region – (ANZSIC 06) 2000 – 2013; 8 April 2014.

⁸ Including milk products manufacture for the West Coast regional economy, and which is undertaken at Westland Milk Product's plant at Hokitika.

⁹ Statistics New Zealand data for mining exclude on-site employees engaged in mineral processing, construction and site preparation activities. Therefore they understate the importance of the mining industry to Buller and the West Coast. A 2010 Berl report (Potential Contribution of Mining to the West Coast Region; report prepared for Development West Coast; November 2010) estimates the extent of this understatement is around 50% - i.e. the mining industry accounts for around 35% of all jobs in Buller and 13% of all jobs on the West Coast.

¹⁰ As represented by the Accommodation and Food Services group. This is only a proxy for tourism since accommodation and food services will also be used by non-tourists. Also tourism related activities will also be covered by other industry groups – e.g. retail trade, arts and recreation services and other services.

December 2013, guest nights had fallen to 200,125 (i.e. a fall of 18.5%). For the West Coast, guest nights for the year ended December 2000 were 871,932 and had risen to 1,223,664 for the year ended December 2006 (i.e. a rise of 40.3%). For the year ended December 2013, these had fallen to 1,080,483 (i.e. a fall of 11.7%).¹¹

- 3.7** Agricultural employment in Buller and the West Coast also grew rapidly between 2000 and 2006. Since 2006, there has been continued but less spectacular growth. For Buller in 2000, there were 260 agricultural jobs, growing to 410 jobs in 2006. By 2013, the number of agricultural jobs in Buller had grown to 430. For the West Coast region, agricultural jobs in 2000 were 540, growing to 930 in 2006. By 2013 they had increased to 1,020, an increase of 10.0% since 2006.
- 3.8** Holcim (New Zealand) Ltd's cement plant near Westport is also a significant employer providing around 150 jobs in 2013. Employment at the plant has been relatively stable over the past decade.
- 3.9** In summary, for both the Buller District and the West Coast region, employment growth since 2000 has resulted from increased activity in the agricultural¹², mining and tourism sectors. Between 2000 and 2006, the agricultural and tourism sectors were the dominant growth sectors, but more recently (i.e. between 2006 and 2013), increased mining activity has been the main source of economic growth.
- 3.10** Future economic growth for the Buller and West Coast economies is also likely to depend on the three key economic drivers of agriculture, mining and tourism. Future growth in agriculture employment is likely to be limited by reduced scope for dairy farm conversions, whilst growth in tourism will be affected by a number of factors including economic conditions in overseas and local markets, exchange rates, changes in tourist destination preferences and local and national tourism promotional initiatives. In recent years, tourism numbers have shown declines in Buller and for the West Coast as a whole. Expansion of mining activity offers the

¹¹ Source: Commercial Accommodation Monitor Pivot Tables; Ministry of Economic Development (www.tourismresearch.govt.nz); 8 April, 2014.

¹² Including milk processing, but for the West Coast this is all done at Westland Milk Products dairy factory at Hokitika in the Westland District.

greatest hope of significant increases in economic activity, especially in the Buller District.

3.11 The district is also currently facing the possible future closure of the Holcim cement plant near Westport. Holcim has obtained resource consents to construct a new cement manufacturing plant at Weston in the Waitaki District but is awaiting approval of the business case from its overseas parent company. Should the go-ahead for the new plant be given, the Westport plant would be closed. From a broader West Coast perspective, any new coal mining developments in Buller would not only offset the possible closure of the Holcim plant but also help to offset the recent closures of the Pike River and Spring Creek mines in the Grey District.

3.12 Therefore the future economic prospects for the Buller District and West Coast regional economies appear at best to involve new mine developments giving rise to injections of new growth to complement steady but unspectacular growth in the remaining sectors of each of the two economies. A 2010 Berl Economics report states:

“Our assessment of the West Coast economy is that the Buller District will rise and fall with the mining sector. Westland District will rise and fall with tourism and dairy. As the main service centre for the West Coast region, Greymouth District’s growth is better spread across industries (with a bias toward mining) but is heavily dependent upon the fortunes of Buller and Westland.

Growth in dairy appears to have eased off, and additional gains are likely to be from productivity or product improvements rather than volume increases. Tourism is a growth industry, although growth will be incremental and there are issues around infrastructure, sustainability and environmental impacts. Mining appears to provide the greatest step change potential for the Region with the opportunity to positively affect growth in the regional economy.”

3.13 However, since the Berl report was prepared the Pike River and Spring Creek mines in the Grey District have closed, the new Escarpment Mine in Buller proposed by Buller Coal Limited (a subsidiary of Bathurst Resources) although having been

granted consents is on hold, international prices for coal and gold have fallen (leading to the proposed “mothballing” of Oceana Gold’s Globe Mine at Reefton in 2015 ¹³) and the outlook for significant expansion of the mining industry on the West Coast is less certain.

- 3.14** At worst, no new mining developments in Buller, the closure of Holcim’s Westport cement plant and an extended “mothballing” of Oceana Gold’s gold mine at Reefton would likely see a significant decline in the level of economic activity on the West Coast, but especially within the Buller District.

4. ECONOMIC BENEFITS OF THE TE KUHA MINE PROJECT

Increased Economic Activity during Project Construction ¹⁴

- 4.1** Prior to the mining operation commencing there will be a 12 month mine construction phase. This will involve the employment of an estimated 64 full time equivalent (FTE) employees on site and in Westport, with wages and salaries of \$4.2 million. The construction activities, like the proposed mining activities, would be undertaken on a 5 day week basis, resulting in the workforce being largely domiciled within the Buller District during this 12 month construction period.
- 4.2** In addition the Project would involve construction expenditure estimated at \$40 million. Of this around 50% (\$20 million) would be spent with local Buller District businesses supplying goods and services to the Project and a further 20% (\$8 million) with businesses on the West Coast, outside of the Buller District.
- 4.3** These are the direct economic impacts for the Buller District and West Coast regional economies from mine construction. However in addition to these direct economic impacts, there are indirect impacts arising from:

¹³ See Otago Daily Times, 29 June, 2013: www.odt.co.nz/news/business/.../oceana-mothball-reefton-gold-mine

¹⁴ Unless stated otherwise data in this section provided by Stevenson Group Limited.

- The effects on suppliers of goods and services provided to the site from within the District and Region (i.e. the “forward and backward linkage” effects); and
- The supply of goods and services to employees at the site and to those engaged in supplying goods and services to the site (i.e. the “induced” effects). For example, there will be additional jobs and incomes for employees of supermarkets, restaurants and bars as a consequence of the additional expenditure by employees directly involved in the mine’s construction at the site and living within Buller and elsewhere on the West Coast.

4.4 District and regional multipliers can be estimated to gauge the size of these indirect effects. The size of the multipliers is a function of the extent to which a district and region are self-sufficient in the provision of a full range of goods and services and the district or region’s proximity to alternative sources of supply. For the Buller District, multipliers have been estimated for coal mining of 1.23 for output, 1.86 for employment and 1.47 for wages and salaries¹⁵. These imply total impacts (i.e. direct plus indirect impacts) for the Buller District economy over the 12 month construction period of:

- Increased expenditure of \$24.6 million;
- 119 additional jobs; and
- \$6.2 million in additional wages and salaries.

¹⁵ Taken from the evidence of Mr Geoffrey Butcher in relation to an application for resource consents to mine coal on the Denniston Plateau, June 2011. An earlier report by Mr Butcher for Solid Energy estimated higher Buller District multiplier values – for output 1.48, for employment 2.28, and for wages and salaries 2.02. (See Butcher Partners Limited. November 2004. *Regional and District-Wide Economic Impacts of the Cypress Mine*). The analysis to assess the Te Kuha Mine Project’s economic impacts has used the same multipliers for mine construction as for mining. Buller District multipliers produced by Mr Butcher for construction of Meridian Energy Limited’s proposed Mokihinui Hydro Project were of similar magnitude – 1.30 for expenditure, 1.50 for employment and 1.44 for wages and salaries (see Statement of Evidence of Michael Campbell Copeland for Meridian Energy Limited, 28 September, 2011; ENV-2010-CHC-115, 123, 124 and 135).

4.5 For the West Coast region, the corresponding multipliers are for output 1.26, for employment 2.04 and for wages and salaries 1.53.¹⁶ These multipliers are slightly higher than for the Buller District reflecting the region's higher level of self-sufficiency (i.e. less reliance on imports of goods and services from outside the local economy). The total impacts (i.e. direct plus indirect impacts) for the West Coast regional economy over the 12 month construction period are therefore:

- Increased expenditure of \$35.3 million;
- 131 additional FTE jobs; and
- \$6.4 million in additional wages and salaries.

Increased Economic Activity during Project Operation ¹⁷

4.6 Following the construction phase, the mine is expected to produce around 4 million tonnes of coal over its estimated 16 year mine life – i.e. an average of 250,000 tonnes per annum. The value of the coal produced is estimated to be around \$35 million per annum.¹⁸

4.7 The mining operation is expected to provide employment on site or within Westport for 44 FTE staff on a 5 day working week basis. Wages and salaries for these staff are estimated at \$4.4 million per annum. Other expenditure during the Project's operation is estimated at \$25 million per annum, with 40% (\$10 million per annum) spent with Buller District businesses and a further 20% (\$5 million per annum) spent elsewhere on the West Coast.

¹⁶ Taken from the evidence of Mr Geoffrey Butcher in relation to an application for resource consents to mine coal on the Denniston Plateau, June 2011. An earlier report by Mr Butcher for Solid Energy estimated higher West Coast region multiplier values – for output 1.69, for employment 2.69, and for wages and salaries 2.42. (See Butcher Partners Limited. November 2004. *Regional and District-Wide Economic Impacts of the Cypress Mine*). West Coast regional multipliers produced by Mr Butcher for construction of Meridian Energy Limited's proposed Mokihinui Hydro Project were of similar magnitude – 1.40 for expenditure, 1.67 for employment and 1.65 for wages and salaries (see Statement of Evidence of Michael Campbell Copeland for Meridian Energy Limited, 28 September, 2011; ENV-2010-CHC-115, 123, 124 and 135).

¹⁷ Unless stated otherwise data in this section provided by Stevenson Group Limited.

¹⁸ At railhead.

4.8 As explained in the previous section of this report, there are additional expenditure, employment and income effects as a consequence of the additional goods and services required by the local suppliers of goods and services to the Project and the Project employees. These are the so called “indirect” economic impacts. Using the same multipliers as used in the previous section, the total (i.e. direct plus indirect) economic impacts of the Project for the Buller District, during its 16 year operation, are therefore:

- Increased expenditure of \$12.3 million per annum;
- 82 additional FTE jobs; and
- \$6.5 million per annum in additional wages and salaries.

4.9 For the West Coast region, the total (i.e. direct plus indirect) economic impacts of the Project during its 16 year operation are therefore:

- Increased expenditure of \$18.9 million per annum;
- 90 additional FTE jobs; and
- \$6.7 million per annum in additional wages and salaries.

4.10 At the conclusion of the mine’s economic life (estimated to be 16 years) there will be a 1 to 2 year land rehabilitation period. This will provide reduced ongoing employment for an estimated 6 FTE staff. During this period there will also be some additional expenditure with local businesses and again there will be associated direct plus indirect expenditure, employment and income effects, but at lower levels than during the mine’s operation.

Economic Benefits from Increased Economic Activity

4.11 As indicators of levels of economic activity, economic impacts in terms of increased expenditure, employment and incomes within the Buller District and West Coast regional economies are not in themselves measures of improvements in economic welfare or economic wellbeing. However there are economic welfare enhancing

benefits associated with increased levels of economic activity. These relate to one or more of:

- Increased economies of scale: Businesses and public sector agencies are able to provide increased amounts of outputs with lower unit costs, hence increasing profitability or lowering prices;
- Increased competition: Increases in the demand for goods and services allow a greater number of providers of goods and services to enter markets and there are efficiency benefits from increased levels of competition;
- Reduced unemployment and underemployment¹⁹ of resources: To the extent resources (including labour) would be otherwise unemployed or underemployed, increases in economic activity can bring efficiency benefits when there is a reduction in unemployment and underemployment. The extent of such gains is of course a function of the extent of underutilized resources within the local economy at the time and the match of resource requirements of a project and those resources unemployed or underemployed within the local economy; and
- Increased quality of central government provided services: Sometimes the quality of services provided by central government, such as education and health care, are a function of population levels and the quality of such services in a community can be increased if increased economic activity maintains or enhances population levels.

4.12 It is reasonable that increasing economic activity (i.e. expenditures, incomes and employment) within the Buller and West Coast economies as a consequence of the proposed mining activities will give rise to one or more of these four welfare enhancing economic benefits for the local community. For example, increases in (or the retention of) population in the District will help underpin existing school rolls.

¹⁹ Underemployment differs from unemployment in that resources are employed but not at their maximum worth; e.g. in the case of labour, it can be employed at a higher skill and/or productivity level, reflected in higher wage rates.

Other Economic Benefits

- 4.13** On current estimates, the Project is expected to pay royalties of around \$0.5 million per annum to the Crown each year during the mine's 16 year operating life – i.e. a total of \$8.0 million. There will also be site access payments to the Buller District Council and DOC estimated to be \$0.5 million and \$85,000 respectively over the life of the Project.
- 4.14** The mine operator (Stevenson), in recognising it has a responsibility to the communities in which it operates, will bring to the Buller District an additional major corporate to assist in the support of local infrastructure and activities which generate greater social, cultural, educational, environmental and economic benefits. The Project is proposing specific offset activities relating to pest control, land preservation and the cleaning up of old mine sites. In addition the Project will also contribute to the "social fabric" of the Buller District community via staff and their families belonging to service clubs, sports clubs and other voluntary organizations. As well as fulfilling leadership roles and making other contributions within the community, the Project staff and their families will help provide the critical mass to underpin these organizations' ongoing sustainability.

5. POTENTIAL ECONOMIC COSTS OF THE TE KUHA MINE PROJECT

Displaced Economic Activity

- 5.1** From an economic perspective, the Project will not displace activities whose expenditure, employment and wages and salaries need to be deducted from the estimated additional economic activity generated by the new coal mining activities proposed. The location of the Te Kuha Deposit, 12 kilometres south east of Westport, and the transportation of the coal by rail will have minimal impacts on tourism in the Buller District and on the West Coast. Also, the construction and operation of the new mine is likely to lead to an increase in the number of business visitors to Westport and the site, and who will increase visitor spending in the District on locally provided accommodation and hospitality.

Utilities

- 5.2** Externality costs can arise when utilities provided by central or local government (e.g. roads, water supply, storm water and flood control systems and wastewater disposal) are not appropriately priced. In this case, no such externality costs will arise.
- 5.3** The Project will not require any public road improvements²⁰ to be undertaken, with the exception of an upgrade to Nine Mile Road where a ford crosses this road. The mine operator will be required to meet the costs of this upgrade. The site will be self-sufficient with respect to other utility services.

6. CONCLUSIONS

- 6.1** The Buller District and West Coast regional economies have experienced limited economic growth in recent years, with employment in mining, agriculture and tourism levelling off or falling. The mining sector has suffering from the closure of the Pike River and Spring Creek mines, Buller Coal's Escarpment mine being placed "on hold", the proposed "mothballing" in 2015 of Oceana Gold's Globe mine at Reefton and lower international prices for coal and gold making existing and future mine developments uncertain. The Buller District also faces the possibility of the future closure of Holcim's cement plant near Westport.
- 6.2** The Te Kuha Mine Project's construction, operation and rehabilitation activities will provide a much needed stimulus to the local Buller District and West Coast economies. The Project will generate net economic benefits and enhance the economic well being of the Buller and West Coast communities by increasing expenditure, employment and incomes in the respective local economies. Over the 16 year mine operating period, it is estimated that the Project will result in additional direct total expenditure within the Buller District averaging \$20 million per annum

²⁰ On-site road construction costs will be fully internalised within the joint venture's cost structure and are therefore not externality costs.

(\$320 million in total), additional direct employment of 64 FTE staff and additional wages and salaries for these employees of \$4.2 million per annum. Including indirect impacts, the proposal will generate within the Buller District, increased expenditure of \$12.3 million per annum, 82 additional FTE jobs and \$6.5 million per annum in additional wages and salaries.

- 6.3** For the West Coast region over the 16 year mine operating period, it is estimated that the Project will result in additional total expenditure of \$18.9 million per annum, 90 additional jobs and \$6.7 million per annum in additional wages and salaries (including both direct and indirect impacts).
- 6.4** There will also be increased expenditure, employment and incomes for the Buller District and West Coast Regional economies from the Project during its 12 month construction period prior to mining commencing and its 1 to 2 year land rehabilitation phase at the conclusion of the mine's operating life.
- 6.5** Importantly, the Project's mining activities will be based on a 5 day working week encouraging mine staff to be permanently resident in, or near, the Buller District. The Project will help to underpin the local population base with economic efficiency benefits in terms of increased economies of scale, greater competition, reduced unemployment (or underemployment) and retention of central government provided services.
- 6.6** The Project via royalties and access payments will make significant financial contributions to central Government and the Buller District Council. The mine operator and its staff will contribute to the "social fabric" of the local Buller District community. The Project will help sustain the financial viability of KiwiRail's Midland Line for freight and passenger services to and from the West Coast.
- 6.7** The Project will not give rise to economic externality costs.