BEFORE THE ENVIRONMENT COURT
AT CHRISTCHURCH

ENV-2010-CHC-115, 123, 124 AND 135

IN THE MATTER	**of Appeals pursuant to Section 120 of the Resource Management Act 1991**
BETWEEN	**WEST COAST ENT INC** **Appellant**
AND	**ROYAL FOREST AND BIRD PROTECTION SOCIETY OF NEW ZEALAND INC** **Appellant**
AND	**WHITE WATER NEW ZEALAND INC** **Appellant**
AND	**DIRECTOR GENERAL OF CONSERVATION** **Appellant**
AND	**WEST COAST REGIONAL COUNCIL AND BULLER DISTRICT COUNCIL** **Respondents**

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STATEMENT OF EVIDENCE OF
KATHARINE JANE WATSON
FOR DIRECTOR GENERAL OF CONSERVATION
Dated: 15 May 2012

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AND	**MERIDIAN ENERGY LIMITED** **Applicant**
AND	**FRIDA INTA** **Section 274 Party**
AND	**WHANAU PIHAWAI WEST – RICHARD WAYNE BARBER AND IRI MAY BARBER MILNER** **Section 274 Party**
AND	**J MacTAGGART** **Section 274 Party**
AND	**ORION ENERGY NZ LTD, ALPINE ENERGY LTD, MAIN POWER NZ LTD AND ELECTRICITY ASHBURTON LTD** **Section 274 Party**
AND	**NZ RAFTING INC** **Section 274 Party**
AND	**ANN SHERIDAN** **Section 274 Party**
AND	**BULLER ELECTRICITY** **Section 274 Party**

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1. QUALIFICATIONS AND EXPERIENCE

1.1. My full name is Katharine Jane Watson.

1.2. I am an archaeologist and director of Underground Overground Archaeology Ltd. I hold a Master of Arts (with Distinction) in Anthropology (from the University of Otago).

1.3. I have worked as a self-employed consultant archaeologist since 2000. I work on the West Coast and in Canterbury and specialise in the archaeology of coal and gold mining on the West Coast. I have carried out investigations within my area of expertise for and/or in collaboration with: the Department of Conservation, Solid Energy New Zealand, BRM Developments Ltd, Gold and Green Resources, Auzex Resources Ltd, Buller District Council and the New Zealand Archaeological Association (NZAA).

1.4. I am familiar with the Mokihinui River and Mokihinui Gorge to which these proceedings relate.

1.5. I have visited the Mokihinui River twice. An initial visit to familiarise myself with the river and its environment was made in July 2008, when the pack track was walked as far as Andersons Flat. In September 2008 I walked the pack track from Specimen Creek to the road end, and inspected various archaeological sites along the route.

1.6. In April 2008 I was retained by the Department to peer review Meridian's archaeological evidence and I subsequently presented evidence on behalf of the Department at the resource consent hearing in October 2008.

1.7. I have provided archaeological services to the Mokihinui-Lyell Backcountry Trust on matters relating to the Old Ghost Road proposal. In particular, I prepared an archaeological assessment of a bridge installed at the Lyell campground end of the track, and have also been commissioned to provide advice on how best to manage the historic fabric on sections of the track that are being upgraded in the Mokihinui.

1.8. I have read the Environment Court's Code of Conduct for Expert Witnesses, and I agree to comply with it. I confirm that the issues addressed in this brief of evidence are within my area of expertise.

1.9. I have not omitted to consider material facts known to me that might alter or detract from the opinions expressed. I have specified where my opinion is based on limited or partial information and identified any assumptions I have made in forming my opinions.

1.10. My opinions rely in part on the evidence presented by Ian Wightwick and Cathryn Barr.

2. SCOPE OF EVIDENCE

2.1. My evidence will deal with the following:

- the archaeological values present in the area affected by the Scheme;

- the significance of these archaeological values and how they compare regionally and nationally;

- how the proposal will affect the archaeological values;

- the implications of the Scheme for the 'Old Ghost Road'; and

- how I consider the proposed conditions avoid, remedy or mitigate any adverse effects.

3. KEY FACTS AND OPINIONS

3.1. There are 11 recorded archaeological sites alongside the Mokihinui River, from its mouth to the forks. There are known to be a number of unrecorded sites in the area, and there are likely to be more unknown unrecorded archaeological sites. Eight of the recorded archaeological sites will be affected by the proposed dam and its associated infrastructure, and at least two of the unrecorded sites – the Rough and Tumble track and the orchard – will be affected.

3.2. The internal context of the Mokihinui pack track is good, as 70-80% of the track survives intact and undamaged and associated features such as drains, fords and borrow pits all survive.

3.3. The external context of the sites is moderate to high and this landscape is representative of gold mining landscapes on the West Coast.

3.4. Although locally important, the complex of sites in the Mokihinui gorge cannot be said to be rare at a regional or national level. Further, none of the individual sites are rare.

3.5. Overall, the information potential of the sites is good to high.

3.6. The condition of the sites and their external contextual value, as well as their information potential, all contribute to the moderate to high interpretation and amenity potential of the sites.

3.7. In summary, the condition of the archaeological sites in the Mokihinui Gorge is mixed. This is also true of the internal contextual values, although the external contextual values are moderate to high. The complex of sites is not rare, and the sites have no known cultural associations. The information potential of the sites is high, the historical values moderate and the amenity values moderate to high.

3.8. The sites have a strong association with an important aspect of New Zealand's history, and appear to be held in high esteem by the local community. The level of technical accomplishment is generally low, with the exception of the pack track, which represents a higher level of accomplishment. The sites are not strongly associated with the earliest period of the district's settlement and nor do they have high symbolic values.

3.9. Overall, the Mokihinui archaeological complex is of moderate archaeological significance (on a scale of low, moderate or high) at a regional level. It has moderate integrity, is associated with a significant theme and is representative of small-scale mid-late nineteenth century quartz mines.

3.10. The Scheme would destroy most of the recorded archaeological sites within the Mokihinui gorge, with the exception of part of the Mokihinui pack track, part of the Rough and Tumble track and one of the settlement sites. It is also possible that the compressor site is above the inundation level. The loss of most of the archaeological sites would lead to the loss of most of the archaeological values of the area, including the amenity and contextual values.

3.11. The loss of these archaeological sites would reduce the archaeological values of the Mokihinui gorge to low, a loss that would be a significant adverse effect.

3.12. The loss of these archaeological values is contrary to the heritage objective listed in the Buller District Plan.

4. EXISTING ENVIRONMENT

4.1. There are 11 recorded archaeological sites alongside the Mokihinui River, from its mouth to the forks, and there are known to be a number of unrecorded sites in the area, including a shipwreck, a railway formation, coal mines, the Rough and Tumble track

and an orchard. It is likely that there are other unrecorded archaeological sites related to the hard rock gold mining of the 1870s and 1880s in the area. The recorded archaeological sites are mostly related to the mining history of the area, with the exception of an adze find spot near the mouth of the river. Eight of the recorded archaeological sites will be affected by the proposed dam and its associated infrastructure, and at least two of the unrecorded sites – the Rough and Tumble track and the orchard – will be affected.

4.2. Works is currently being carried out on one of the recorded sites – the Mokihinui pack track – as part of the Mokihinui-Lyell Backcountry Trust's development of the 'Old Ghost Road', a mountain biking and tramping track being developed in conjunction with the New Zealand Cycle Trail project. I understand this work is being kept to a minimum, in order to retain as much of the historic fabric of the track as possible. There will be some reformation of the track where it is particularly boggy at Andersons Flat. Where slips (the result of the 1929 earthquake[1]) have altered the route of the track, the track may be realigned. Streams will be bridged and a track will be established on the non-historic section route between Specimen Creek and the Forks.

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[1] At several places in my statement I refer to the 1929 earthquake, and its impact on the Mokihinui pack track. Appendix 1 contains historic photographs of the aftermath of the earthquake in the Mokihinui Gorge, and in Seddonville when it subsequently flooded.

4.3. There are a number of known but unrecorded archaeological sites in close proximity to the transmission line associated with the dam proposal. These sites are with coal mining near Seddonville, Charming Creek and at Stockton. As the sites are not recorded and the route of the transmission line has not been inspected by an archaeologist, the proximity of these features to the transmission line is not known. Road widening at Chasm Creek may affect a railway formation and tunnel there, and changed erosion patterns may affect a shipwreck at the mouth of the Mokihinui River. There are no recorded or known archaeological sites at the substation site. The existing archaeological environment is discussed further in the following section of my evidence.

5. THE ARCHAEOLOGICAL VALUES

5.1. A recent NZHPT publication (NZHPT 2010) makes the following recommendation with regard to identifying historic or archaeological values:

> Articulating a statement of significance is undertaken by identifying the values esteemed by communities and assessing the significance of those values by use of the threshold criteria in particular geographic contexts.
>
> NZHPT 2010: 19.

5.2. My assessment identifies the values of the archaeological sites known to be affected by the Scheme using the criteria recommended by NZHPT

in their guidelines on assessing archaeological sites (i.e. those values esteemed by archaeologists) and also those listed in the West Coast Regional Council RPS (the values esteemed those living on the West Coast). Values are identified as being low, moderate or high. I use the NZHPT threshold criteria to assess the significance of those values.

5.3. The NZHPT recommends using the following criteria to assess the significance of archaeological values:

(a) **Integrity:** Does the place retain significant features from its time of construction, or later periods when important modifications or additions were carried out?

(b) **Association:** How important is the story, theme or event and is there a strong association or connection between the place and the story, theme or event?

(c) **Representativeness:** Is the place a good example of a class of activity, design, type, features, use, technology or time period?

(d) **Exceptional:** Does the place have features that serve as a primary example of those features?

(e) **Rarity:** Is the place, or are features within it, few in original number, few in surviving number, or were they the result of rare or unusual historical processes or events at a geographical level or in relation to particular historical themes?

(f) **Uniqueness:** Is the place, or are features within it, unique examples of its type?

5.4. NZHPT recommends using these assessment and threshold criteria regardless of the age of the archaeological site or the legal processes to which it is subject. Each value held by an archaeological site may be ascribed a different threshold (or may not be ascribed any threshold criteria), and not all threshold criteria are relevant to all archaeological values. As such, not all threshold criteria will be relevant to all sites. Where the threshold criteria are mentioned in the discussion below, they are highlighted in bold.

NZHPT Criteria

5.5. The New Zealand Historic Places Trust recommend considering the following when assessing the value of an archaeological site:

- the condition of the site;
- the contextual values of the site;
- the rarity of the site;

- the information potential of the site;
- the cultural associations of the site; and
- the amenity value of the site.

5.6. The NZHPT Guidelines allow for the consideration of other values, including historical values. Historical values are relevant in this case as the sites in question date from the historic period of New Zealand's past.[2]

5.7. The following assessment focuses on the archaeological sites in the Mokihinui gorge. The assessment of the pack track, the Rough and Tumble track and the sites on the true right of the river are not based on detailed recording, but a preliminary inspection of the pack track and interviews with people who have seen the other sites. A full assessment of these sites could result in an increase or decrease in the archaeological values associated with the sites.

Condition

5.8. The condition of the sites is variable. The Mokihinui pack track and the Rough and Tumble track have both been damaged by the ravages of time and the environment, with slips destroying sections of both tracks. The historic fabric of the Mokihinui pack track is in good condition from the

[2] In New Zealand, the 'historic period' is regarded as that period of New Zealand's history that post-dates contact with Captain Cook in the 1770s.

Russell crosses to Jones Creek, after which the historic fabric has suffered more damage, although there are still some excellent sections of intact benching. The section of the pack track between the crosses and Jones Creek is benched for most of its length, and there are at least four cuttings and two embankments. There are also side drains, cut outs or culverts, fords and borrow pits on the track, all of which survive in good condition. East of Jones Creek, the pack track is generally narrower and does not have the features recorded on the section to the west. The condition of the western section, then, is presumably the result of work undertaken on that section of track between 1929 and the cessation of mining in 1942. Work is being carried out on one section of the track as part of the Old Ghost Road development. The area in question is a boggy section of track across Anderson's Flat. The Old Ghost Road is also seeking to return the track to its original alignment where it has been diverted around slips following the Inangahua earthquake (see Appendix 1).

5.9. The condition of the sites on true right of the river is poor, with little surface evidence at either the battery (L28/29) or mining machinery sites (L28/30). The iron bridge (L28/31) is also in a poor condition. The condition of the Rough and Tumble road is not well understood, but the information provided by K. Walker and M. Hansen suggests that the sections of road that survive are in good condition, but that slips have destroyed some sections of it. The sites on the true left of the river are in a better condition, with some above ground

evidence surviving at each site recorded. It is likely that below ground evidence also survives at each of these sites, although the 1929 earthquake and digging by bottle hunters may have affected the survival of such evidence. There have been reports of a chimney from a house at Anderson's Flat (M. Hansen, P. Lusk, pers. comm.) but the condition of this site is not known, although there is likely to be below ground archaeological material in the area. There may also be the remains of outbuildings here. Thus, the condition values of the sites are mixed, with those on the true left in a poor to moderate condition and those on the true right in a poor condition.

Context

5.10. The contextual values of an archaeological site can be considered at two levels – the internal and the external context. The internal context of the sites discussed here is variable and at times unknown or difficult to assess. The internal context of the sites on the true left of the Mokihinui River appears to be reasonable, with each containing most of the components that would originally have made up the functioning sites. This is particularly the case with the various hut sites, which are linked to each other and the Mokihinui pack track via smaller tracks.

5.11. The internal context of the Mokihinui pack track is moderate, as 70-80% of the track survives intact and undamaged and associated features such as drains, fords and borrow pits all survive. The

borrow pits in particular help us understand how the track was constructed.

5.12. The internal context of the battery and compressor sites is not well understood, chiefly because the mines this machinery was used by have not been located as they are outside the inundation area. The battery was installed by the Red Queen mine in 1903 (AJHR 1903) and would have been used by this mine and the neighbouring Swastika mine. It has been more difficult to establish the history of the compressor and which mine it may have been associated with, although the recorded use of a compressed air drill at the Red Queen mine (then owned by the Swastika Company) in 1938 (AJHR 1938) suggests the compressor was used by that mine. If the various features of these mines were found, including the infrastructure that linked them to this machinery, the internal values of these sites would increase.

5.13. The internal context of the site at Anderson's Flat is not known.

5.14. The sites on the true right of the river have poorer internal contextual values than those on the true left, as little surface evidence remains at either the battery or the mining machinery site and none of the associated mining infrastructure has been located as it is outside the inundation area.

5.15. The internal context of the sites, then, is mixed.

5.16. The external context essentially refers to the heritage landscape the sites are part of. This landscape extends beyond the Scheme footprint to include the area up to the Mokihinui Forks and to the headwaters of the Rough and Tumble Creek. While many of the archaeological sites within this area have been recorded as part of the fieldwork for the Scheme (or at least the existence of these sites has been recognised, as is the case with the Rough and Tumble track and Anderson's orchard), it is likely that others exist outside the inundation area, as gold mining took place further up the Rough and Tumble Creek, Maori Creek and Cascade Creek. The remains of the Nile Gold Mining Company's stamper battery are believed to exist on the Nile Creek, up the Rough and Tumble Creek (M. Hansen, pers. comm.). The external context also includes the farm that operated at Mokihinui Forks until the 1929 earthquake, although there is not believed to be any visible evidence of this site (M. Hansen, pers. comm.; historical information about the farm has been difficult to locate, although large blocks of land were applied for at what is now Lake Perrine and in the south branch of the Mokihinui in the 1910s (LINZ: SO 7545). It is possible that these applications were to lease land for grazing, and that the 'farm' at the Forks was simply an area where sheep or cattle were grazed from time to time).

5.17. These sites are inter-connected and one would not exist without the other. Together, they tell a more important and meaningful story than they do separately. The links between the sites are clear – the Mokihinui pack track was put in to service the

mines and those who lived at Seatonville and other sites. The settlement at Seatonville developed because, even with the Mokihinui pack track, the mines were a considerable distance from the nearest settlement. Because of the existing track, the route via the Rough and Tumble to Karamea was put in, and this track would have made access to the Nile Gold Mining Company's workings easier. The Mokihinui pack track and the Rough and Tumble road provided the transport routes necessary to move stock and goods that made establishing an orchard at Anderson's Flat and a farm at Mokihinui Forks viable.

5.18. If archaeological remains of the sites outside the inundation area survive, they would contribute to the heritage landscape of the area. As such, the external context of the sites is moderate to high and this landscape is **representative** of gold mining landscapes on the West Coast.

Rarity

5.19. As already discussed, the sites in the Mokihinui gorge have more meaning as a whole than individually. As such, this discussion of the rarity of the sites focuses on the complex as a whole, rather than considering the rarity of each site type. Before the rarity of the sites can be assessed, the site type must be defined. Essentially, this complex of sites forms a mid-late nineteenth century quartz mining complex. This complex includes the tracks, which functioned in a broader world than quartz mining.

5.20. A number of quartz mining complexes exist within the Buller region, including at Britannia, the Lyell, Waiuta, Alexander, Big River, Murray Creek, Globe-Progress and Merrijigs. Each of these complexes consists of mining remains, settlement sites and transportation networks. There may also be similar hard-rock mining remains of a similar vintage at Boatmans Creek, Larrys Creek and Painkiller Creek, but no archaeological surveys of these areas have been carried out.

5.21. There are a number of variables that need to be taken into account when considering the similarity or otherwise of quartz mining complexes, including period and success of operation, number of mines operating and the technologies employed. Quartz mining complexes fall along a spectrum relating to date, size and success. Sites like the Mokihinui and Waiuta are at opposite ends of this spectrum and considering the two as similar is not valid – one was discovered at the end of the gold rush era and the other when that era was long gone; one tapped only a small gold resource, the other a major one; one was probably funded by local capital, the other by English capital. The complexes that remain are vastly different as a result, yet they still contain those essential components of machinery remains, settlement sites and transport networks, as do each of the other quartz mining complexes mentioned.

5.22. The Mokihinui complex is similar in terms of date, size and success to the Britannia and the Lyell. More companies operated at the Lyell than at Mokihinui and a number of these were more

successful (most notably the Alpine and its successors) but, as already discussed, these are differences of degree. The leader mines clustered around Eight Mile Creek at the Lyell appear to have been particularly similar to those at Mokihinui, as these were small mines which operated for a short period of time and, for the most part, were not overly successful. The archaeological remains of these mines comprise open and collapsed shafts and drives, mullock heaps, tramways and chutes, all of which could be expected to be found above the inundation level at Mokihinui. There are also numerous hut sites and tracks within the Lyell, and two battery sites down alongside Lyell Creek.

5.23. Some of the remains at the Britannia are more visually impressive than those in the Mokihinui gorge, including the ten-stamp battery. This battery replaced an earlier two-stamp battery, which was powered by a waterwheel and installed in 1902 and was the same type of battery as that recorded at Jones Creek (L28/26; AJHR 1903; Wright 2006:6). Further, quartz had to be transported across Britannia Stream via a flying fox cable, while the Red Queen used an aerial cableway to transport quartz across the Mokihinui River to the first battery (WCT 13/12/1884; Wright 2006:15). Another similarity is that mines in both areas operated until the 1930s.

5.24. Based on the knowledge we have of the mining complexes at Mokihinui, the Britannia and the Lyell, the remains of the three complexes are probably similarly preserved at each area, although

the Britannia and the Lyell both have standing remains of stamper batteries.

5.25. Other nineteenth century quartz mining complexes exist on the West Coast outside of the Buller district, and the most similar to those in the Mokihinui are those at Moonlight and Blackball. Although similar in scale to the mining that occurred at Mokihinui (but probably more successful), mining did not get underway at Blackball until the early 1890s, following the discovery of payable quartz there in 1889 (Eastman 1982:67). In contrast, quartz mining at Moonlight Creek began in the late 1860s, making it one of the earliest sites of quartz mining on the West Coast. The Moonlight also saw considerably more mining activity in the 1930s than Mokihinui did (Eastman 1982:).

5.26. There are potentially other comparable mining complexes elsewhere in New Zealand, including in Central Otago and in the Thames region, although direct comparisons with complexes in these regions are difficult due to the level of information available about mining in these areas. It is likely, however, that small quartz mining complexes that are more comparable to the Mokihinui complex exist in both the Coromandel and Central Otago.

5.27. Although locally important, the complex of sites in the Mokihinui gorge cannot be said to be rare at a regional or national level. Further, none of the individual sites are rare.

Information Potential

5.28. Although this section on information potential discusses archaeological excavation, it should be borne in mind that archaeological excavation is another form of site destruction and is thus not necessarily a desirable outcome. This is because archaeological theories and methods, both in terms of information recovery and research design, change with time and the archaeological methods of the future will inherently be better and more effective than those of the present day.

5.29. The information potential of the sites is moderate to high and a variety of issues could be investigated through further archaeological work in the area. The sites that make up the Mokihinui quartz mining complex can be grouped as three site types – transport networks, settlements and industrial sites. The information potential of each site type will be considered in turn.

5.30. An examination of the Mokihinui pack track and the Rough and Tumble track using the techniques devised by Breen and Nelson (2006) would shed greater light on the construction techniques employed, thereby giving an indication of how much time and money was spent on construction of the tracks and, in so doing, giving an indication of the overall importance accorded to these tracks. Detailed recording would allow the gradient of the track to be determined and a spatial analysis of the location of borrow pits would help us better understand the track's construction. Detailed

recording would also enable more detailed comparison with other similar tracks, such as the Croesus track, thus highlighting any unusual features of either track. In the case of the Rough and Tumble track, detailed recording would also permit a comparison of the built track with the specifications in the contract drawings and would highlight any differences between the two.

5.31. Excavation and recording of the settlement sites has the potential to reveal much about the people who lived in the Mokihinui gorge and the lives they led. One aspect that could be studied would be the dwellings themselves, including size, construction and layout. Through artefacts, we could learn more about who was living in the Mokihinui gorge – obviously there were men, but what about women and children. The artefacts would tell us more about the lives of these people, their health, diet, etc, and the difficulties of supply in this location. To answer these questions, rubbish dumps would have to be located and it is possible that rubbish was thrown straight into the river, which would have provided the easiest means of disposal. Further, the sites may have been dug over by bottle diggers and there may be few in situ artefacts left. Finally, processes associated with the 1929 earthquake may also have disturbed these sites significantly.

5.32. Excavation of the mining machinery sites would first answer the question of whether or not the two potential machinery sites on the true right of the river were actual machinery sites. Excavation of the sites on the true left would reveal more about

the technology employed at these sites and the spatial arrangement of the various features. The results of such an investigation would allow comparisons with other mine sites and determine whether or not there had been any different or unusual methods employed at the Mokihinui reefs in response to the terrain and/or geology. Survey work to locate the mine sites themselves would permit a spatial analysis of the various components of each of the mines and would certainly shed light on how the miners dealt with the steep terrain.

5.33. Overall, the information potential of the sites is moderate to high.

Cultural Associations

5.34. The sites have no known cultural associations.

Amenity Values

5.35. The amenity values of the archaeological sites on the true left of the Mokihinui River are moderate to high, while the amenity values of those on the true right are low. The sites on the true right of the river, although on public conservation land, are difficult to access and there is little to see at two of the three sites on the true right (the battery and mining machinery sites).

5.36. The sites on the true left of the river are also on public conservation land and are all accessible from the Mokihinui pack track, now part of the Old Ghost Road. The establishment and marketing of this track, to be used by both mountain-bikers and

trampers, has improved the accessibility of these archaeological sites and thus increased their amenity value by opening up the area to a new group of users and allowing them to experience this aspect of the West Coast (and New Zealand's) past. The Mokihinui pack track provides an excellent physical connection between the sites, offering the chance to view archaeological sites and see some of New Zealand's history. The track is also tangible evidence of the lengths that people went to in their search for gold. The track, and the track to Karamea via the Rough and Tumble, provide a direct experience of how people travelled in the past and the difficulties they faced. In so doing, the track connects people today directly with the lives of people in the past.

5.37. This connection, and thus the amenity value of the sites, is enhanced by the hut remains at Seatonville and elsewhere along the track, which provide evidence of how miners lived during the mid-late nineteenth century. The associated mining remains provide a contrast to the more visually impressive mining remains at Waiuta, Big River and Murray Creek, and tell the story of smaller, less successful mines. This is a story that is no less important than the story of the large, successful mines, especially because there were probably more unsuccessful mining ventures than there were successful ones.

5.38. By providing access through to the Mokihinui Forks, the Mokihinui pack track also provides tangible evidence of the planned-for connection with the Lyell and is evidence of the high hopes

held for the future of both areas, even at a time when the mining returns from areas were declining.

5.39. The condition of the sites and their external contextual value, as well as their information potential, all contribute to the moderate to high interpretation and amenity potential of the sites. If archaeological remnants of the mines themselves and the associated transport networks were located and were relatively easily accessible, the interpretation potential of the sites within the Mokihinui would be high.

Historical Values

5.40. Historical values are assessed by considering how much of a site's history is known, and whether or not the site has an association with an historical event or figure. In the case of the Mokihinui gorge sites, a reasonable amount of general information is known about the history of each of the sites, but much of the detail is missing. For example, we know that the Mokihinui pack track replaced an earlier blazed or foot track put in when gold-bearing quartz was first discovered in the Mokihinui gorge in the 1870s, that the Mokihinui pack track was put in in the 1880s and that it was planned to connect it with the Lyell via the Eight Mile track. We do not know exactly when the work was carried out, however, or why the track was never completed, although it is reasonably easy to hazard a guess.

5.41. The sites have no known associations with historical figures. The sites are **associated** with the

hard rock mining that following the earlier alluvial gold rushes on the West Coast.

5.42. Overall, the historical values of the sites are moderate.

West Coast RPS Criteria

5.43. Of the West Coast RPS "matters to be considered when assessing heritage places or sites", it is considered that the following criteria have been covered in the discussion above:

(b) The level of association of the place with events, persons or ideas of importance in the history of the (district/region);

(e) The potential of the place for public education;

(i) The rarity of the type of historic place; and

(j) The extent to which the place forms a key part of a wider historical and cultural complex or historical and cultural landscape.

5.44. The following matters have not been considered in the preceding discussion, or have only been covered in part.

(a) The extent to which the place reflects important or representative aspects of New Zealand history;

(d) The level of community association with, or public esteem for, the place;

(c) The importance of the place to Poutini Ngai Tahu;

(f) The level of technical accomplishment or value, or design of the place including the rarity of technical accomplishment or design;

(g) The symbolic or commemorative value of the place; and

(h) Whether it is an historic place known to date from early periods of the district's settlement i.e., such items are likely to be included in the schedule.

5.45. The sites are **representative** of the quartz mining that followed the 1860s alluvial gold rushes to the West Coast. Quartz rushes took place to some particularly remote locations, such as the Mokihinui, Kirwans Hill and the Lyell, and were responsible for the opening up and settlement of parts of the West Coast. The remains in the Mokihinui are representative of the less successful mines and an ultimately unsuccessful settlement. The remains are also representative of the pack

tracks that once formed an important network throughout New Zealand, but particularly in areas such as the West Coast where overland travel was difficult. As such, the sites represent an important aspect of New Zealand's history – the West Coast gold rushes, which were largely responsible for the European settlement of the West Coast. Further, the gold rushes, and particularly the quartz rushes, were responsible for the development of various industries and businesses associated with that industry, including the companies that made the equipment.

5.46. The response of the community to the Scheme with regard to heritage matters indicates that the archaeological sites within the Mokihinui gorge, particularly the Mokihinui pack track, are held in high esteem by the local community and to the community of backcountry users. By increasing public awareness of the Mokihinui, its history and its archaeology, the opening of the Old Ghost Road is likely to increase the community esteem for the archaeological sites within the Mokihinui Gorge, particularly the pack track and other sites in close proximity to the track.

5.47. The importance of the place to Poutini Ngai Tahu is not known and is best discussed by Poutini Ngai Tahu.

5.48. The level of technical accomplishment associated with the sites is low to moderate. It is moderate for the Mokihinui pack track, given the steep nature of the terrain that the track has been constructed

through and the fact that much of its length has been cut out of rock. It would not have been easy country to build a track of such a relatively steady gradient through. That the formation has lasted as long as it has in relatively good condition is testament to the skill and technical accomplishment of those who surveyed, designed and built it.

5.49. With the exception of the Russell crosses, the symbolic or commemorative value of the sites is low. The sites do symbolise and commemorate the hard work of those who strove to eke out an existence here, but these values are not high.

5.50. The sites in the Mokihinui gorge are not strongly associated with the early period of Maori or European settlement in the Mokihinui or Buller district. Although there were alluvial miners in the Mokihinui area from 1866, the available evidence suggests that miners did not make their way up the gorge until 1874, when alluvial miners are recorded as prospecting at the Rough and Tumble Creek (*Inangahua Times* 19/12/1874).

Summary

5.51. In summary, the condition of the archaeological sites in the Mokihinui Gorge is mixed, with those sites on the true right of the river in a poor condition and those on the true left in a moderate condition. This is also true of the internal contextual values, although the external contextual values are moderate to high. The complex of sites is not rare, and the sites have no known cultural associations.

The information potential of the sites is high, the historical values moderate and the amenity values moderate to high.

5.52. The sites have a strong association with an important aspect of New Zealand's history, and appear to be held in high esteem by the local community. The level of technical accomplishment is generally low, with the exception of the pack track, which represents a higher level of accomplishment. The sites are not strongly associated with the earliest period of the district's settlement and nor do they have high symbolic values.

5.53. Overall, the Mokihinui archaeological complex is of moderate archaeological significance (on a scale of low, moderate or high) at a regional level. It has moderate integrity, is associated with a significant theme and is representative of small-scale mid-late nineteenth century quartz mines.

6. HOW WILL THE PROPOSAL AFFECT THE ARCHAEOLOGICAL VALUES?

6.1. The Scheme would destroy most of the recorded archaeological sites within the Mokihinui gorge, with the exception of part of the Mokihinui pack track (Mr Wightwick's evidence suggests that 82% of the track will be inundated, with the possibility that more will be inundated during flood events), part of the Rough and Tumble track (it is not clear how much of the track will be inundated) and one of the settlement sites. It is also possible that the compressor site (L28/26) is above the inundation

level. The loss of most of the archaeological sites would lead to the loss of most of the archaeological values of the area, including the amenity and contextual values. The Scheme may also impact other archaeological sites, including a shipwreck at the mouth of the Mokihinui (through erosion), a railway formation at Chasm Creek (through road widening) and archaeological sites associated with coal mining near Seddonville, Charming Creek and at Stockton (the transmission line may affect these sites).

6.2. The values of the surviving sections of track would be much diminished. As already discussed, each of the archaeological sites in the gorge derives most of its value from its association with the other sites. Not only would these other sites be destroyed (some of which were the reason for the existence of the Mokihinui pack track), but sections of both tracks would also be destroyed, meaning that the sites would be less complete than they are now.

6.3. The loss of these archaeological sites would reduce the archaeological values of the Mokihinui gorge to low, a loss that would be a significant adverse effect.

6.4. The loss of these archaeological values is contrary to the heritage objective listed in the Buller District Plan. The heritage objective is:

> To protect places and sites of historical and cultural value from the adverse effects of land use activities and to ensure where appropriate,

access to historic and cultural sites is maintained and enhanced.

7. DO THE PROPOSED CONDITIONS AVOID, REMEDY OR MITIGATE ANY ADVERSE EFFECTS?

7.1. I have reviewed the conditions of the consent that relate to archaeological matters, particularly conditions 14-18 and conditions 102-107.

7.2. If the MHP were to proceed, conditions 14-18 would be suitable.

7.3. It should be noted that the archaeological survey work required by condition 15 needs to be carried out to properly assess the values of the archaeological sites and should be carried out prior to an archaeological authority being sought from NZHPT. Further, this survey should seek to locate those components of the mining sites that are outside the inundation area, but that are connected with the mining remains at Seatonville. The evidence in the neighbouring Lyell area suggests that tracks, huts, adits and drives and other mining infrastructure are likely to remain in situ on the hillside above Seatonville, and the value of the archaeological remains at Seatonville cannot be properly understood without understanding exactly how much of each site remains in situ, and what condition it is in.

7.4. Condition 16 requires the excavation of sites of historic significance, but does not list which sites would be excavated. All known occupation and

machine sites within the gorge should be excavated, if the Scheme goes ahead, in order to minimise the loss of archaeological information. Even if this work is carried out, the archaeological values of the Mokihinui will be significantly reduced.

7.5. Condition 102 requires the relocation of the remains of the iron bridge. As Barr notes in her evidence (Para. 6.6), relocating historical material or structures is not a preferred heritage management tool. This is because it removes the material or structure from its context, and thus considerably lessens its value as a heritage item, to the point where it becomes little more than a monument, rather than part of a broader story or environment. The bridge is of particular importance in its current location as one of the few signs of human activity that can be seen on the rafting trip in the gorge.

8. CONCLUSIONS

8.1. The MHP will have a negative impact on the archaeological values of the Mokihinui valley, through the inundation of most of the recorded archaeological sites within the valley. These archaeological sites are of moderate significance at a regional and district level. At this stage, without a full archaeological assessment of the pack track, the Rough and Tumble track, Anderson's Flat and where the transmission line crosses the Charming Creek walkway and Stockton, it is not possible to know whether or not the mitigation proposed is sufficient to mitigate for the loss of these archaeological sites. At a minimum, however, the

mitigation needs to be expanded to include those measures I have outlined, including more survey work and a more detailed outline of the required excavation work. Even if this work is carried out, the archaeological values of the Mokihinui will be significantly reduced.

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APPENDIX 1

1.1 These images show the damage caused along the Mokihinui River, and at Seddonville, by the 1929 Murchison earthquake. Photos 1 – 3 were supplied by John Price of Greymouth. Photos 4 and 5 were supplied by D Johnston of Levin.

1.2 Photos 2 and 3 were published in the West Coast Messenger, October 29, 2008.

1.3 The caption in the Messenger accompanying photo 2 reads "This photograph, dating from shortly after the 1929 Murchison earthquake, is taken from a position roughly where Meridian is proposing to build a dam for a new power station in the Mokihinui Gorge. It is looking out towards Seddonville from the gorge and the road can just be seen on the far side of the slip."

1.4 The caption in the Messenger accompanying photo 3 reads "The iron bridge can be seen still suspended after its central supporting column had collapsed. This was about 1930. The rest of the bridge later collapsed in a storm and the remains of the bridge and column can still be seen in the river to this day. This bridge was built for access to Karamea via the Rough and Tumble Creek and Glass Eye Creek in the very early days and was never used after the earthquake."

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3.

4.

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