WEST COAST DAM INVENTORY
AND POTENTIAL HAZARD RATINGS

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AND

POTENTIAL HAZARD RATINGS

J.L. Benn - June 1993

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DAM INVENTORY

APPENDIX 1 (WITH DIAGRAMS)

COVER PHOTOGRAPHS

The top photograph shows the leaking face of the Denniston No. 2 dam, and the bottom photograph shows the damage to State Highway 73, caused by the failure of the Bell Dam in October 1991.

damcon_kjb
APPENDIX 1 CONTINUED

BULLER DAM SITES TO INVESTIGATE

CoalCorp
Stockton: 30° (see following diagram)
Resource Consent 89038. Current - Expires 31.3.2027
(coal mine - some up to 10 m high).

Thomas Brown Ltd
Hut Creek: Resource Consent 84023. Current - Expires
27.8.1994 (coal mine).

Mulkin Mining Ltd
Garveys Creek: Resource Consent 84041. Current -

Birchfields
Giles Creek: Resource Consent? (coal mine).

Val Curry
Mitchells Gully: 5° Resource Consent 80012. Expired
30.11.1988 (gold mine, very old dams - 1860’s to 1870’s)

D.O.C.
Big River Dam Site: D.O.C. walkway, Reefton. Unlisted
(Historical, gold mine site, may be empty).

WESTLAND DAM SITES TO INVESTIGATE

Tuckers Flat Mining
Kaniere Gold: Crawfish Creek: 81056. Dead - Expires

Blue Spur Mining
Hou Hou Creek tributaries: Resource Consents 83052

Rimu Gold Mining
Natural runoff: Unlisted. Supposed to be registered
and certified by an engineer. No progress.

Timberlands(?)
Gaylor Dam, Sandstone Creek, Rimu (Mahinapua Forest).
May have breached or been drained. Unlisted
(historical).

West Coast Electric
Power Board
Lake Wahapito outlet: Resource consent. Current
Expires 6.3.2009 (hydro electric power).

West Coast Electric
Power Board
Skiffingtons Swamp, Fox Glacier Power Station:
Unlisted. Built in 1960’s. -3m high. Notes from
Power Board state the dam as "jellylike" when built
and concerns were expressed about its stability.
1. **INTRODUCTION**

This report assesses the potential hazard from dam failure within the West Coast region (Figure 1). In recent years a number of dams have failed with some causing considerable damage. The West Coast Regional Council, concerned with these failures, decided to compile an inventory, with information on dam location, legal, structural and hydrological details, and ultimately a Potential hazard rating.

The project complies with the Resource Management Act (1991) and the Regional Council's own commitment to identifying hazards within its area.

2. **BACKGROUND**

Many dams are located throughout the West Coast. The oldest structures date back to the 1860's and numerous dams have been constructed in very recent times. Also, several large 'hydro-electric' dams are proposed in the region.

The dams vary considerably in size, construction materials and the volume of water their reservoirs contain. Equally variable is the purpose the dam's were constructed for. Examples include water supplies for factories, communities and mines, river diversions, hydraulic breaking mechanisms for old railway inclines, and settlement ponds for various industrial discharges.

The precise number and location of dams in the region was not previously known due to a large number of them being very old and remotely located, and many being unlisted (they have no water permit). Hence until now, no formal documentation of many of the dams existed.

The most significant recent dam failure instigated this report. In October 1991, the Bell Dam, 8km south east of Kumara, burst and caused extensive damage to State Highway 73 and the native forest scenic reserve (see following section).

3. **EXAMPLES OF WEST COAST DAM FAILURES**

23 - 26 February 1866 - Hokitika (South Channel)

After thirty six hours of almost continual rain the Hokitika River rose, flooding much of Hokitika. It was noted that "no preceding flood had committed so much havoc in so short a time" (West Coast Times 26/02/1866). This was accounted for by the construction of a dam on the southern channel which pushed the water over to the unprotected parts of Gibson Quay on the north bank. Along the length of the quay, its width was reduced between 3m and 9m in places as the bank was eroded away. Many buildings along the quay were destroyed as they became undermined and the dam on the southern channel was almost completely destroyed (Benn 1990).
26 - 29 September 1874 - Thompson's Dam, Charleston

After forty eight hours of heavy rain, all West Coast rivers were in flood. The Nile and Cosmopolitan races near Charleston were washed away as Thompson's Dam, in which a large quantity of water was stored in the creek below Haines Dam, broke away (West Coast Times 29/09/1874).

11 July 1961 - Hallorgan's Dam, Reefton

Millions of litres of water poured down the hillside to the east of Reefton from a disused mine dam that burst. The water inundated streets, lawns and gardens in the eastern portion of Reefton. The water travelled down the hillside between 3.00 pm and midnight. The flood waters left a large covering of silt in its path.

The dam at Hallorgan's mine had been abandoned for twelve years, and the failure was attributed to heavy rain in the preceding days washing out the mine stoppings. Inangahua County Council workmen worked through the night to control the flood waters (Greymouth Evening Star 13/10/1974).

12 January 1974 - Fairmaid Dam, Caroline Terrace

The Fairmaid Dam on the Caroline Terrace was built around the turn of this century for the purposes of gold sluicing operations. However, for many years the dam has been used by the Westport Sawmilling Company. On the 12 January 1974, at about 1.00 pm the dam breached, causing considerable damage to the downstream channel and to State Highway 6. The highway was impassable for about one hour. A short warning of the failure was given in the morning, when it was noticed the dam face was crumbling. This gave the mill staff time to move much equipment and thus reduced the amount of potential damage considerably (Greymouth Evening Star 12/01/1974).

The Westland Catchment Board in its October 1974 meeting papers described the failure in the following way:

"The cause of the failure apparently, was an old timber box culvert through the centre of the dam face and the existence of which was not known, this dam being some 70 or 80 years old. This culvert deteriorated and allowed the dam face to collapse. The dam must have occupied some 5 to 7 acres in the area and the height of the dam itself would be at least 30 feet. Consequently, it will be realised that a very large body of water was suddenly released and completely scoured out the gorge downstream of here as well as damaging the State Highway which was impassable for a time.

28 January 1991 - Lake Mudgie, Fox Creek, Arakura

The following report by the Regulations and Consents Manager to the West Coast Regional Council (14/2/91) describes the failure of the dam at Lake Mudgie as:

"Lake Mudgie was formed by an earth dam across Fox Creek, an Arakura River tributary, many years ago. It was used as a water supply for goldmining in the area."
Over the years the dam structure has deteriorated particularly in the area incorporating the timber spillway. It is understood an attempt in recent years to "blow" the dam was only partially successful and this further weakened the structure.

In an attempt to hold the dam at the level it had been lowered to, DOC placed some rock in the spillway area after approval by the Catchment Board.

On the night of 28 January following intensive rainfall and an earthquake, what was left of the spillway area failed. The large volume of water that discharged down Fox Creek destroyed two road crossings and damaged some property.

This structure has never been formally authorised under the provisions of the Water and Soil Conservation Act 1967 and I believe it is not possible to apportion blame for its failure to any particular party".

18 October 1991, Bell Dam, Okuku

The most damaging recent dam failure in the region occurred in the early hours of 18 October 1991, when the Bell Dam, 8km south east of Kumara collapsed. An inspection report produced by a Regional Council Regulations and Consents Officer (dated 18 October 1991) stated that:

"It appears that the dam had collapsed as a result of failure rather than overtopping. This conclusion was reached following observation of high water level indicators on the upstream side of the dam being at least 1 metre below the original crest. The dam has been constructed from gravel material as shown by the exposed face of fill material on the left side of the dam. It is considered that this material even if well compacted during construction, would be pervious and subject to seepage.

Also of importance is that the crest height of the dam was approximately 5 metres whereas the water right issues for this dam limited the height to 3 metres unless the dam was designed and its construction supervised by a qualified engineer. To our knowledge no such person was engaged to design or construction.

The effects of the dam failure were catastrophic. The released water entered a creek alongside the water race and carved a 40 metre wide chasm for approximately 1 kilometre before hitting the State Highway where twin 1800mm culverts designed to take the normal flow were totally inadequate for the volume of water that must have arrived. Even had these culverts been adequate the trees and gravel build up at the entrance would have quickly rendered them useless. As a result a 100 metre length of highway was completely wiped out to an average depth of approximately 8 metres. Works Consultancy Services arranged a contractor to install a temporary bridge and construct new approaches. They were able to open the road to traffic the following day. A tentative estimate of over $100,000 to restore the road has been suggested by Works Consultancy Services".

The final cost of the recently repaired road was approximately $215,000. The bottom cover photograph shows the damage caused by this failure.
Mid December 1992, Stafford Loop Road, Goldsborough

A small gravel dam used for a gold mine’s water supply burst just before Christmas 1992, after a period of wet weather. Although the dam was small, considerable damage was done to the Stafford Loop Road, which was adjacent to the dam, at the bottom of the worked terrace level.

According to mine staff at the site, the dam burst suddenly and a wall of water about 1m deep and 20m wide flowed over the terrace edge and onto the gravel road. The road metal was completely scoured out making the road impassable. However, the road was quickly repaired due to heavy machinery being on hand at the mine site.

4. STATUTORY RESPONSIBILITIES

In accordance with the Resource Management Act (1991), the Regional Council has responsibilities aimed at identifying, avoiding or mitigating natural hazards. Dam failures can be considered as a natural hazard, defined in the Resource Management Act as:

"‘Natural hazard’ means any atmospheric, or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire or flooding), the action which adversely affects or may affect human life, property or aspects of the environment”.

Specific relevant sections of the Resource Management Act relating to dams and natural hazards are defined as follows:

"Section 13 - Restrictions on certain uses of beds of lakes and rivers
(1) Unless expressly allowed to do so by rule in a regional plan or a resource consent granted by a regional council, no person may, in relation to any lake bed or river bed, carry out any of the following activities:
   (a) Any use, erection, reconstruction, placement, alteration, extension, removal, or demolition of any structure or part of any structure in, on, under or over the bed ...

"Section 30 - Functions of regional councils under this Act -
(1) Every regional council shall have the functions for the purposes of giving effect to this Act in its region ...
   (1)(c)(iv) The avoidance or mitigation of natural hazards ...

...(1)(e) The control of the use of land for the purpose of -
   (1)(e)(i) The setting of any maximum or minimum levels or flows of water:
   (ii) the control of range, or rate of change of levels or flows of water..."
"Section 35 - Duty to gather information, monitor and keep records ...
...(5) The information to be kept by a local authority ... shall include ...
...(5)(g) Records of natural hazards to the extent that the local authority considers appropriate for the effective discharge of its functions...

5. PREVIOUS STUDIES

Two relevant reports on New Zealand dams have been published by the Ministry of Commerce in recent years. The first, a dam inventory (1988), provided legal, structural and hydrological information for nearly 500 dams, 14 of which are located on the West Coast. A potential hazard rating was also provided.

A discussion paper "A Safety Assurance for New Zealand Dams" was produced in August 1991. This paper outlined procedures for the construction, maintenance, monitoring, and general planning issues associated with dams. The hazard rating classes are described in detail.

In the current report, the inventory format and hazard ratings classes are based on those of the Ministry of Commerce.

6. POTENTIAL HAZARD RATING (PHR)

The Ministry of Commerce (1991) describe the PHR as:

"The potential hazard rating of a dam is determined by both the physical size of the dam and its reservoir, and the extent and nature of downstream habitation, development and the physical environment which would be threatened by the uncontrolled release of the dams contents:

It should be noted that the potential hazard rating of a dam is not a judgement on the integrity or security of its structure, the quality of its design or construction, nor the extent and surveillance features which have been incorporated into it".

In other words, the PHR assesses what would be affected downstream if a dam burst: It is not predicting the probability, likelihood or chance of dam failure.

7. POTENTIAL HAZARD RATING CLASSES

Due to the remoteness and small size of many of the dams recorded on the West Coast, a very low hazard class has been added to the Ministry of Commerce PHR classes. These are as follows:

(1) Very Low Potential Hazard
- loss of life very unlikely
- minor damage to river channels and adjacent vegetation
- some bush tracks may be damaged
- no damage may occur
(2) **Low Potential Hazard**

- loss of life unlikely

- no more than minor damage to pastures, fences and farm structures in a few nearby properties

- no more than minor damage to local roads, bridges, railways or other public utilities resulting in minor inconvenience and economic loss

(3) **Significant Potential Hazard**

- A few lives threatened in a small number of dwellings/and or structures

- Appreciable potential damage to land and crops other than the dam owner’s or sensitive environmental assets

- Potential damage to roads, bridges and railways or other public utilities sufficient to result in significant inconvenience to the community

- Potential loss of stored water to the extent that there would be likely interruption (but not total breakdown) of a communities water supply

(4) **High Potential Hazard**

- More than a few lives threatened in small settlements, towns or urban areas

- Substantial potential damage to commercial or industrial establishments, or permanent damage by erosion etc to extensive areas of arable land or sensitive environmental assets

- Potential damage to roads, bridges, railways or other public utilities with consequent major disruption to community activities and/or major public and private economic loss

- Potential loss of stored water or disruption of associated facilities that are essential to the continued effective functioning of a community’s water supply.

When allocating a PHR for a dam, an assessment was made of the potential consequences of dam failure, and the dam was placed in the highest category.
8. DISCUSSION

8.1 DAM INSPECTIONS AND INVENTORY COMPILATION

Dam sites were identified by means of water permits issued, aerial photographs, topographic maps, personal reports and Regional Council mine inspection reports. Field inspections were undertaken between September 1992 and June 1993. A total of 84 dam sites were recorded. Additional sites were visited upon which it was noted that no dams existed due to (a) being breached, (b) being demolished, or (c) not being built, even though relevant water permits may have been granted.

This report does not cover all dam sites within the region. This is due to an unexpectedly large number of dams being identified. It was originally estimated there were only about 30-40 dams in the region. The time frame of the current project made it impossible to visit and record all sites. However, most of the dams whose whereabouts were previously unknown, or whose accessibility was extremely difficult or isolated have now been recorded; known remaining sites to investigate are recorded in Appendix I. It is estimated that about five to six working weeks would complete the investigation and detailed recording of the remaining sites.

When a site was identified and investigated, structural and topographical details were entered into field notebooks on site, and the dam and its environs were photographed. Information on legal details (owner, resource consent, land description etc) was obtained from Regional Council files and cadastral maps.

In some cases details were difficult to obtain and in such instances vacant spaces have been left on the inventory sheets (to be filled in as information becomes available). Examples include areas with no aerial photo coverage, making reservoir area (and thus reservoir volume) difficult/impossible to calculate. It is also interesting to note that some quite substantial dam structures and reservoirs are not shown on topographic maps. Sometimes crest length and height were difficult to measure due to the dam structure being densely vegetated or in the case of some old earth dams, it was indiscernible what was formed structure and what was the natural ground surface. In the majority of cases an accurate measurement of reservoir depth was not possible due to either the depth of the water or inaccessibility to the deepest region of the reservoir.

In the order of the dams in the inventory is basically north to south, with the inventory being divided into three groups, based on the region’s three district boundaries. The report has been loosely bound so as additional pages can be added to the inventory when appropriate.
8.1.1 REGIONAL ANALYSIS

Table 1 presents some statistics extracted from the completed dam inventory sheets.

Table 1. Number of Dams and Selected Details

<table>
<thead>
<tr>
<th>District</th>
<th>Construction Material</th>
<th>Crest height</th>
<th>Potential Hazard Rating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Earth</td>
<td>Concrete</td>
<td>Other</td>
</tr>
<tr>
<td>Buller</td>
<td>21</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>(Distr%)</td>
<td>(70)</td>
<td>(10)</td>
<td>(20)</td>
</tr>
<tr>
<td>Grey</td>
<td>22</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(Distr%)</td>
<td>(88)</td>
<td>(8)</td>
<td>(4)</td>
</tr>
<tr>
<td>Westland</td>
<td>29</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>(Distr%)</td>
<td>(100)</td>
<td>(8)</td>
<td>(4)</td>
</tr>
<tr>
<td>Region Total</td>
<td>72</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>Region % Recorded</td>
<td>85.71</td>
<td>5.95</td>
<td>8.33</td>
</tr>
</tbody>
</table>

Several important parts can be determined from the above table. The great majority of dams throughout the region are earth constructions (85.7%), equal to, or over three metres high (58.3%) and present a very low hazard (59.5%), or low hazard (36.9%). Only three dams in the region were classified as posing a significant hazard and none present a high hazard. The three dams that present are significant hazard are the Arnold Dam in the Grey District, and the Kapitea Long and Kapitea Short Dams in the Westland District. The ‘two’ Kapitea Dams for all intents and purposes can be considered the same dam (2 sections of the same structure). These three "significant hazard dams" are amongst the largest in the region and are built for the same purpose - that of hydro electric power generation. They have been recorded in the Ministry of Commerce (1988) inventory. It is important to note that in that report, the Arnold Dam was assigned a low hazard: Field observations during this study suggest a significant hazard rating may be more appropriate considering the downstream assets at risk and the volume of water in its reservoir.
8.2 DISTRICT ANALYSIS

8.2.1 Buller

Buller has the most recorded dams of the three districts in the region (just ahead of Westland). However, as far as is known, Buller also has the largest number of dams remaining to be inspected (40', see Appendix 1).

Dams and their reservoirs in Buller are generally larger than those in the others districts, the larger dams being located in the high country around the Denniston, Stockton and Millerton coal fields and Lake Rochfort. Also, Buller most likely has the highest number of very old dams in the region (dating back to the turn of the century or earlier).

Buller has significantly more dams recorded in the low hazard category than the other two districts. It is the only district to have more dams recorded in the low hazard category than the very low category (by almost a 2:1 ratio). There are no cases of significant potential hazard recorded for the district. In general, dam failure presents a low hazard to the district.

8.2.2 Grey

The Grey District has the least number of recorded dams in the region, and as far as is known, there are no further dam sites at present to inspect.

Most of the district’s dams are small structures, located on low lying ground, and are associated with goldmining, although the Arnold Dam, one of the region’s most significant, is located in the district.

The vast majority of dams in the region present a very low hazard: the Arnold Dam the only one to present a significant potential hazard to the district. The few “low hazard dams” would mainly affect only local, rural roads and perhaps very minor pastural or structural damage.

8.2.3 Westland

Table 1 shows the statistics for Westland District are quite similar to those for the Grey District. However, there are several known dams in the district that still require inspection (see Appendix 1).

Most dams in the district are associated with the gold mining industry, but the largest structures have been built for hydro-electric power generation. The Kapitea short and long dams in fact form the largest dam structure and the largest reservoir in the region. The Kapitea dams probably present the most significant hazard to the region. Besides these dams, the majority of recorded dams in the district present a very low hazard.
9. CONCLUSION

Eighty four dam sites throughout the region have been investigated and recorded, with the aim of compiling an inventory, detailing (where possible) structural, hydrological and legal details about each site. The ultimate aim of the exercise was to determine the potential hazard that dam failure presents to the West Coast Region.

It can be concluded that potential dam failures present a very low hazard on a regional scale. At a district level, potential dam failures pose a low hazard in the Buller District and a very low hazard in the Grey and Westland Districts. There are no recorded cases of high potential hazard in the region, and only three cases of significant potential hazard (the Arnold Dam in the Grey District and the Kapitea Long and Short dams in Westland District).

It is considered that information from the remaining sites to be inspected will not significantly alter the findings presented in this report.

10. RECOMMENDATIONS

Considering the information presented in the text above and the following inventory, it is recommended that:

(1) The remaining identified sites are investigated and recorded as soon as practical.

(2) The inventory is kept up to date by requiring applicants for resource consents to fill in relevant sections of the inventory sheet when applying for water permits to dam, with one copy being added to the inventory and one copy placed on file.

(3) Owners/operators of unlisted dams are notified, and given the option to register the dam with the Regional Council otherwise demolish the structure or dewater the reservoir, as instructed by the Regional Council.

(4) Owners/operators of unsafe dams are notified, and given the option to strengthen the structure to the Regional Council’s satisfaction, or if the structure is over 3m high, to the satisfaction of a registered engineer, otherwise demolish the structure, or dewater the reservoir, as instructed by the Regional Council.

(5) Owners/operators of unlisted historic dams are notified and given the option to register the dam and to strengthen the structure as in (4) above (if needed), or to dewater the reservoir. It is considered by the Regional Council that dewatering such reservoirs does not interfere with the historic values of the actual dam structure. A good example of this is the Lake Hochstetter dam on Nelson Creek - the dam structure is a registered historic site even though no permanent reservoir is held back by the dam, due to it being breached many years ago.
(6) When an operator has made a dam redundant, the dam is immediately demolished or dewatered, and the Regional Council be notified forthwith, by the operator.

(7) When a water permit to dam is granted, the applicant notifies the Regional Council as soon as possible as to whether a structure has been constructed or not (Many operators have relevant water permits but have not proceeded to build the dams, or have demolished/dewatered the dam, unbeknown to the Regional Council).

11. REFERENCES


Greymouth Evening Star (12.1.1974): Extract

Greymouth Evening Star (13.10.1974): Extract


West Coast Times (26.2.1866): Extract

West Coast Times (29.9.1874): Extract
12. **ACKNOWLEDGEMENTS**

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Mr Wayne Harrison (Natural Resource Planning Manager, The West Coast Regional Council) administered the project, and Mrs Amanda Mahuika (The West Coast Regional Council) typed the text and helped with final production of the reports. Miss Jo Garrill (BSc Hons. Liverpool University) proof read the script.
Dam Inventory
Buller District
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Un-named Creek (South Terrace, Karamea)
CATCHMENT REFERENCE: 951000 (Karamea Estuary)
MAP REFERENCE: NZMS 260 L27 Karamea 372917
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Chris Anderson
ADDRESS: Arapito, R.D. 3, Karamea
TELEPHONE: (03) 782 6858
DAM PURPOSE: Stock water supply
RESOURCE CONSENT: 76/29 - Dead
MINING LICENCE:
LEGAL LAND DESCRIPTION: Pt Sec 58, B1k XIV, Oparara S.D, State forest
ACCESS: Private (locked gate - call Chris Anderson)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1978
DESIGNED BY: Chris Anderson
BUILT BY: Ken Kees Contractor
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): ~3m
CREST LENGTH (m): ~20m
METRES ABOVE SEA LEVEL: ~118
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous Earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 2500
RESERVOIR AREA (Ha): ~0.1
RESERVOIR DEPTH (m): 2.5
CATCHMENT AREA (Ha): 0.5
SPILLWAY DISCHARGE CAPACITY: 2m x 0.5m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y (daily)
IRREGULAR:
INSPECTED BY WHOM: Chris Anderson
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM SOUTH TERRACE - KARAMEA (CHRIS ANDERSON)

Small dam on pakihi terrace top (land leased off Department of Conservation).

Crest forms part of farm access road.

Spillway is on true left abutment.

Dam has leaked at base since it was built: Chris Anderson is going to put an impermeable clay blanket on upstream face.

If burst would cause inconvenience due to washing out farm access road. The main Karamea Road is 2.5km away. This would probably not be affected.

Creek channel downstream of dam is deeply incised and heavily vegetated.

Very low hazard - steep sided, densely vegetated channel downstream, before main Karamea Road ~ 2.5km away.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Millerton Incline Dam
RIVER: Gravity Stream tributary
CATCHMENT REFERENCE: 938000
MAP REFERENCE: NZMS 260 L28 Mokihinui 153524
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Gravity Coal bin water supply and operations
RESOURCE CONSENT: Unlisted - Historical
MINING LICENCE: 
LEGAL LAND DESCRIPTION: S01407, Sec 8, Blk VI, Ngakawau S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1896
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Concrete
CREST HEIGHT (m): 7
CREST LENGTH (m): 26
METRES ABOVE SEA LEVEL: -200
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: 
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -760 (based on average depth of 2.85m)
RESERVOIR AREA (Ha): 0.0267
RESERVOIR DEPTH (m): 5.2 (at dam structure - shallows quickly upstream to 0.5m)
CATCHMENT AREA (Ha): 60
SPILLWAY DISCHARGE CAPACITY: 5.1m x 0.6m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR: Y
INSPECTED BY WHOM: Department of Conservation staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: Y 
VERY LOW:
NOTES ON MILLERTON INCLINE DAM

Originally used to hydraulically operate Granity coal bins and machinery at the plant.

Is now a major feature of the Department of Conservation Millerton Incline Walkway.

Built in a steep, rocky, densely vegetated gorge.

Only holds a small amount of water.

Spillway located in central crest.

3 outlet pipes and valves at base of structure (not used anymore).

Dam infilled considerably with sediment.

Low Hazard. If burst it could affect the Millerton road and possibly damage may occur to main road, railway and some Granity properties at base of hill, about 1.25km away (steep fall from dam to Granity).

SEE DIAGRAM OPPOSITE
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Gravity Stream tributary
CATCHMENT REFERENCE: 938000
MAP REFERENCE: NZMS 260 L28 Mokihinui 164518
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Coal mine water supply
RESOURCE CONSENT: Unlisted - Historical
MINING LICENCE:
LEGAL LAND DESCRIPTION: S01407, C.L., Blk VI, Ngakawau S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1900's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Concrete and Earth (see notes)
CREST HEIGHT (m): 5.65 (Concrete section), -2 (Earth section)
CREST LENGTH (m): 46 (Concrete section), 132 (Earth section)
METRES ABOVE SEA LEVEL: -290
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Solid Concrete, Homogeneous Earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -72900+
RESERVOIR AREA (Ha): 2.43
RESERVOIR DEPTH (m): 3+
CATCHMENT AREA (Ha): 43
SPILLWAY DISCHARGE CAPACITY: 1.3m x 0.5m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR: Y
INSPECTED BY WHOM: Department of Conservation staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON MILLERTON DAM

On Department of Conservation land adjacent to Stockton Road.

Constructed in two major sections: Concrete section and earth section.

Concrete section is either leaking at base or has an outlet at base (access difficult).

Earth section forms the true left bank of the lake - earth is formed against a wooden wall.

Earth section is heavily vegetated with native bush.

Spillway exits from upstream end of earth section.

Low Hazard. If burst could damage road crossing to Old Dip coal mine (overgrown), and two crossings of the Millerton Road (if bridges washed out or damaged). Main Road/Granity and rail at base of hill about 2.5 km away. Water would have probably cost much energy by the time it reached here - Densely vegetated channel with 7m high waterfalls.

SEE DIAGRAM OPPOSITE
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Old Dip Mine Bath-house Dam
RIVER: Gravity Stream tributary
CATCHMENT REFERENCE: 938000
MAP REFERENCE: NZMS 260 L28 Mokihinui 161517
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Coal mine bath house water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: S014017, C.L., Blk VI, Ngakawau S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1900's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Concrete
CREST HEIGHT (m): 2.6
CREST LENGTH (m): 44
METRES ABOVE SEA LEVEL: 320
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Solid Concrete
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~1650
RESERVOIR AREA (Ha): 0.165
RESERVOIR DEPTH (m): ~1
CATCHMENT AREA (Ha): 7.5
SPILLWAY DISCHARGE CAPACITY: See notes
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON OLD DIP MINE - BATH HOUSE DAM

Small concrete dam adjacent to derelict bath-house structure.

Structure is densely overgrown with native bush, making precise measurement difficult.

Access is difficult - up overgrown track.

Reservoir doesn't appear to be deep (depth not measured).

Outlet pipes at base of structure in creek channel.

Wouldn't cause any damage (beside a small amount of bush) if it failed.

Very low hazard.

SEE DIAGRAM OPPOSITE
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: St Patricks Dam
RIVER: 
CATCHMENT REFERENCE: 
MAP REFERENCE: NZMS 260 L29 Inangahua 181454
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Coal Corporation of New Zealand Limited
ADDRESS: CoalCorp, South Island Regional Office, Palmerston St, Westport
TELEPHONE: K. Poynter, (Stockton Manager), (03)7898092 (work), (03)7896695 (home)
DAM PURPOSE: Coal mine water supply and power supply
RESOURCE CONSENT: Westland Catchment Board notified existing use
MINING LICENCE: 
LEGAL LAND DESCRIPTION: C.L. Bik XI, Ngakawau S.D.
ACCESS: Private - call CoalCorp, Granity office

STRUCTURAL DETAILS

CONSTRUCTION DATE: 
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): ~6
CREST LENGTH (m): ~25
METRES ABOVE SEA LEVEL: -680
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Homogeneous earth(?)
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: CoalCorp, Westport

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): 250 000
RESERVOIR AREA (Ha): 10
RESERVOIR DEPTH (m): 2.5
CATCHMENT AREA (Ha): 200
SPILLWAY DISCHARGE CAPACITY: 25m x ?
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: 
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
NOTES ON ST PATRICKS DAM - STOCKTON


Located on eastern side of Stockton Plateau, at base of Mt William.

Access via Stockton coal mine - call Manager.

Put into very low hazard category (Ministry of Commerce = Low Hazard) due to isolated location.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Powerhouse Dam
RIVER: Conn's Creek tributary
CATCHMENT REFERENCE: 936030
MAP REFERENCE: NZMS 260 L29 Inangahua 105397
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Coal Corporation of New Zealand Limited
ADDRESS: Gary Bainbridge (Mine Manager), 15 Domett Street, Westport
TELEPHONE: (03) 789 9881 (work), (03) 789 8100 (home)
DAM PURPOSE: Hydro electric power generation and washing coal
RESOURCE CONSENT: Westland Catchment Board notified existing use(?)
MINING LICENCE:
LEGAL LAND DESCRIPTION: S014021, C.L., Blk VI, Kawatiri S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1900's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Cemented Sandstone blocks and Concrete
CREST HEIGHT (m): 4.5
CREST LENGTH (m): 86
METRES ABOVE SEA LEVEL: -630
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Cemented sandstone blocks
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³):
RESERVOIR AREA (Ha):
RESERVOIR DEPTH (m): 2+
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 2.5m x 0.65m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: Y
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON POWERHOUSE DAM - DENNISTON

Used for power generation at the Denniston mine in early days for washing coal.

Built on a hillside below road to Burnetts Face, adjacent to bath-house building (easy access).

Constructed of cemented sandstone blocks with a concrete cap.

Spillway is towards true right side of dam.

Outlet pipe at 1st corner in crest from true left side (30cm diameter pipe).

Water is ~2m deep at structure but shallows quickly towards hill.

Dam is leaking through cement between blocks in numerous places.

Very low hazard. Would flow across swamp into then into creek channel if burst. May cause minor damage to bath-house building if it failed on true left side.

SEE DIAGRAM OPPOSITE.
Denniston Powerhouse Dam

Cross section at highest point (about 12m east of spillway).

Plan view

NOTE: The above scale represents distances along the centre line of the crest to major features.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: New Road Dam
RIVER: Conn's Creek tributary
CATCHMENT REFERENCE: 936030
MAP REFERENCE: NZMS 260 K29 Westport 098394
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Coal Corporation of New Zealand Limited
ADDRESS: Gary Bainbridge (Mine Manager), 15 Domett Street, Westport
TELEPHONE: (03) 789 9881 (work), (03) 789 8100 (home)
DAM PURPOSE: Denniston Incline hydraulic breaking operations
RESOURCE CONSENT: Westland Catchment Board notified existing use
MINING LICENCE:
LEGAL LAND DESCRIPTION: SO14021, C.L., Blk VI, Kawatiri S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1900's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Concrete
CREST HEIGHT (m): 6
CREST LENGTH (m): 36
METRES ABOVE SEA LEVEL: -650
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL:
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 20 000
RESERVOIR AREA (Ha): 1
RESERVOIR DEPTH (m): 2 (estimated average)
CATCHMENT AREA (Ha): 20
SPILLWAY DISCHARGE CAPACITY: 3.7m x 0.2m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON NEW ROAD DAM - DENNISTON

Situated in a deep desolate gully about 200m from road to O'Sullivans Mine (easy access).

Built on hard sandstone foundation.

Concrete is badly cracked (unlikely to be reinforced).

Spillway just off centre crest towards true left.

Crest is curved slightly on left abutment.

20cm and 30cm diameter outlet pipes at base of structure on creek bed.

Dam not used by CoalCorp for anything now.

Water going over spillway drains into large dam (Denniston No. 2).

Originally used for Denniston Incline hydraulic breaking system.

One of the dams recorded in Ministry of Commerce Dam Inventory (1988).

Low Hazard. If this dam failed the rush of water could cause Denniston No. 2 dam downstream to fail or be overtopped (Denniston No. 2 is in a very bad state of repair). Damage would still be mainly confined to the creek channel and vegetation downstream, plus the Denniston - Waimangaroa road. The effect of the water from the two dams on the Waimangaroa water supply weir ~2.25km downstream is uncertain.

SEE DIAGRAM OPPOSITE
NEW ROAD DAM - DENVISTON PLATAU

CROSS SECTION FROM TRUE RIGHT TO TRUE LEFT

PLAN VIEW

ELEVATION - LOOKING UPSTREAM TOWARDS DAM FACE
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Recreation Dam
RIVER: Conn's Creek tributary
CATCHMENT REFERENCE: 936030
MAP REFERENCE: NZMS 260 K29 Westport 203396
AERIAL PHOTO. REFERENCE: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Coal Corporation of New Zealand Limited
ADDRESS: Gary Bainbridge (Mine Manager), 15 Domett Street, Westport
TELEPHONE: (03) 789 9881 (work), (03) 789 8100 (home)
DAM PURPOSE: Coal mine water supply (Bath-house), and Denniston Hospital Supply
RESOURCE CONSENT: Westland Catchment Board notified existing use
MINING LICENCE: 
LEGAL LAND DESCRIPTION: S014021, C.L., Blk VI, Kawatiri S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1900's
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Cemented sandstone blocks/earth
CREST HEIGHT (m): 3
CREST LENGTH (m): 64.5
METRES ABOVE SEA LEVEL: -650
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Internal earth core
SPILLWAY TYPE: Uncontrolled (2x)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -10 000 - 15000
RESERVOIR AREA (Ha): ~1 (estimated)
RESERVOIR DEPTH (m): 1 - 1.5
CATCHMENT AREA (Ha): 
SPILLWAY DISCHARGE CAPACITY: 4.7m x 0.45m (right abutment), 12m x ~0.5m (left abutment)
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
NOTES ON RECREATION DAM - DENNISTON

Located immediately adjacent road to O'Sullivans mine.

Built on pakihi flat next to old sports field, hence called Recreation Dam.

Originally used for Denniston Hospital water supply. Now used for bath-house and office/shower water supply.

Upstream face is vertical and constructed of cemented sandstone blocks. The main bulk of the dam is earth with rock amouring on the downstream face.

Crest and downstream face quite densely vegetated.

Spillway channels at each end although water is more likely to flow out spillway on right abutment.

Reservoir floor has silted up considerably.

Outlet valve/pipe exits from the central area at the base of the structure.

Low risk - Would probably damage the road to Burnetts face and some minor channel scouring (reservoir shores and channel downstream basically solid sandstone).

SEE DIAGRAM OPPOSITE
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Denniston No. 2 Dam
RIVER: Conn's Creek tributary
CATCHMENT REFERENCE: 936030
MAP REFERENCE: NZMS 260 K29 Westport 098394
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Coal Corporation of New Zealand Limited
ADDRESS: Gary Bainbridge (Mine Manager), 15 Domett Street, Westport
TELEPHONE: (03) 789 9881 (work), (03) 789 0100 (home)
DAM PURPOSE: Denniston Incline hydraulic breaking system
RESOURCE CONSENT: Westland Catchment Board notified existing use
MINING LICENCE:
LEGAL LAND DESCRIPTION: S014021, C.L., Blk VI, Kawatiri S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1900's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Cemented sandstone blocks
CREST HEIGHT (m): 4.8
CREST LENGTH (m): 85
METERS ABOVE SEA LEVEL: ~635
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Internal earth core
SPILLWAY TYPE: Uncontrolled (2x)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): 22 000
RESERVOIR AREA (Ha): 1.1
RESERVOIR DEPTH (m):
CATCHMENT AREA (Ha): 25
SPILLWAY DISCHARGE CAPACITY: 7.5m x 0.69m (left abutment), 3.8m x 0.18m (central crest)

(MAX. FLOOD CAPACITY): REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON DENNISTON NO. 2 DAM - DENNISTON

Built in deep sandstone channel, downstream of New Road Dam (about 5 minute easy walk).

Upstream and downstream faces are vertical, cemented sandstone block walls. An earth core is between the walls.

Two spillways: One in central crest region, other at left abutment left side spillway is carved into sandstone foundation rock.

Two outlet pipes exit from the base of the dam in the old original creek channel (at the highest point in the crest) - 30cm and 18cm diameter pipes valves rusted up.

Dam is leaking severely: Internal core and mortar between sandstone blocks has eroded away (see top cover photos). Two particularly bad areas of core erosion occur between 24.5m and 45m from the left abutment (around crest spillway area) and between 65m and 79.5m from the left abutment (around outlet valves and highest part of dam structure). Leaking section around central spillway is composed of different coloured rock blocks from the rest of the structure - may have been repaired at an earlier stage.

Has apparently been in this condition for many years, according to mine manager (Gary Bainbridge).

One of the dams recorded in Ministry of Commerce Report (1988).

Low Hazard. Would cause damage to local Denniston Road but probably not much else - water would be confined to a relatively deep, hard sandstone channel.

SEE DIAGRAM OPPOSITE
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Lake Brasil (Wharatea Dam)
RIVER: V8 Creek
CATCHMENT REFERENCE: 932113
MAP REFERENCE: NZMS 260 K29 Westport 095365
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Coal Corporation of New Zealand Limited
ADDRESS: Gary Bainbridge (Mine Manager), 15 Domett Street, Westport
TELEPHONE: (03) 789 9881 (work), (03) 789 8100 (home)
DAM PURPOSE: Coal mine water supply
RESOURCE CONSENT: Westland Catchment Board notified existing use
MINING LICENCE:
LEGAL LAND DESCRIPTION: S014021, C.L., Blk X, Kawatiri S.D.
ACCESS: Private - see mine manager

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1978
DESIGNED BY: Coal Corp
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 6
CREST LENGTH (m): 68
METRES ABOVE SEA LEVEL: 635
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Coal Corp Palmerston Street, Westport

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 75000 (figures from M.O.C. 1988 report)
RESERVOIR AREA (Ha): 1.8 (figures from M.O.C. 1988 report)
RESERVOIR DEPTH (m): 
CATCHMENT AREA (Ha): 10 (figures from M.O.C. 1988 report)
SPILLWAY DISCHARGE CAPACITY: 5m x 0.5m (figures from M.O.C. 1988 report)
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON LAKE BRASIL - (WHARATEA DAM)

An earth dam built in a steep sided sandstone gorge.

Spillway is concrete.

Very low hazard - if failed water is confined to gorge - no assets downstream - flows into Cascade River.

THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Gibson's Creek
CATCHMENT REFERENCE: Cape Foulwind
MAP REFERENCE: NZMS 260 K29 Westport 849385
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Milburn New Zealand Limited
ADDRESS: Milburn New Zealand Limited, Cape Foulwind
TELEPHONE: (03) 789 7259
DAM PURPOSE: Cement works water supply
MINING LICENCE: Area covered by many licences
LEGAL LAND DESCRIPTION: D.P. 4484, Blk I, Steeples S.D.
ACCESS: Private

STRUCTURAL DETAILS

CONSTRUCTION DATE: -1980
DESIGNED BY: 
BUILT BY: Cement Works
CONSTRUCTION TYPE: Rock fill
CREST HEIGHT (m): 2.5
CREST LENGTH (m): 24
METERS ABOVE SEA LEVEL: -16
FOUNDATION TYPE: Limestone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled (2x)
PERMANENT/TEMPORARY STRUCTURE: 
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): 
RESERVOIR AREA (Ha): 
RESERVOIR DEPTH (m): 
CATCHMENT AREA (Ha): 
SPILLWAY DISCHARGE CAPACITY: 2m x 0.5m (Central crest), 1m x 0.5m (right abutment) (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: 
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: Y
VERY LOW:
NOTES ON GIBSON CREEK DAM - CEMENT WORKS - CAPE FOULWIND

Small earth dam (overburden) built in creek channel about 30m from quarry access road/Cape Foulwind road.

No formed spillway channel - two channels have eroded through crest top act as spillways.

Low hazard. Only holds a small amount of water - could potentially washout roads, especially if culvert blocked.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Un-named Creek
CATCHMENT REFERENCE: Cape Foulwind
MAP REFERENCE: NZMS 260 K29 Westport 827380
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Milburn New Zealand Limited
ADDRESS: Milburn New Zealand Limited, Cape Foulwind
TELEPHONE: (03) 789 7259
DAM PURPOSE: Cement works emergency water supply
RESOURCE CONSENT: 83063 - Current. Expires 23/7/2004
MINING LICENCE: Area covered by many licences
LEGAL LAND DESCRIPTION: D.P. 10451, Pt Sec 6, Blk I, Steeples S.D.

ACCESS: Private - call Cement Works

STRUCTURAL DETAILS

CONSTRUCTION DATE: Last Century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.7
CREST LENGTH (m): 50
METRES ABOVE SEA LEVEL: 38
FOUNDATION TYPE: Soil
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): 15000
RESERVOIR AREA (Ha): -1
RESERVOIR DEPTH (m): -1.5
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 15cm diameter pipe
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
Small earth dam built for gold mining last century, but now a backup water supply for the cement works.

Built on private land about 600m from road.

15cm diameter pipe is only outlet.

Structure is quite badly eroded on upstream face.

Crest acts as part of farm trade.

Very low hazard. If failed water would go straight through swamp/scrub into a deep creek channel.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

NAME: Un-named
RIVER: Marris Creek catchment
CATCHMENT REFERENCE: 931020
MAP REFERENCE: NZMS 260 K29 Westport 857383
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Buller Community Fertiliser Limited
ADDRESS: B.C.F.L., Cape Foulwind, Westport
TELEPHONE:
DAM PURPOSE: Fertiliser factory water supply
MINING LICENCE: Covered by Cement Works licences
LEGAL LAND DESCRIPTION: Pt Sec 11, Blk 1, Steeples S.D.
ACCESS: Private - see factory staff

STRUCTURAL DETAILS

CONSTRUCTION DATE: Mid 1980's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.7
CREST LENGTH (m): 21
METRES ABOVE SEA LEVEL: -20
FOUNDATION TYPE: Soil
SEALING POSITION AND MATERIAL: Butynol Sheeting on upstream face
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 2225
RESERVOIR AREA (Ha): 0.15
RESERVOIR DEPTH (m): 1.5
CATCHMENT AREA (Ha): 35
SPILLWAY DISCHARGE CAPACITY: 2m x 0.3m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON BULLER COMMUNITY FERTILISER COMPANY DAM - CAPE FOULWIND

Small earth dam built on creek channel near fertiliser factory.

Spillway exits from true left side towards rear of reservoir.

Overgrown with gorse.

Small pump shed near crest.

Very low hazard. Water would flow out drainage channels from kiln dust dump. Land rises away from dam towards fertiliser factory.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Lake Rochfort (Dam 2)
RIVER: Lake Stream
CATCHMENT REFERENCE: Mt Rochfort
MAP REFERENCE: NZMS 260 K29 Westport 039373
AERIAL PHOTO REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Gold mine water supply and hydro electric power generation
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: S014021, C.L. B1kV, Kawatiri S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Late 1800's
DESIGNED BY: The General Exploration Company
BUILT BY: The General Exploration Company
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 11 (See notes)
CREST LENGTH (m): 278+ (See notes)
METRES ABOVE SEA LEVEL: 470
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Buller Electricity, Palmerston Street, Westport

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 234 257
RESERVOIR AREA (Ha): 5.25
RESERVOIR DEPTH (m): 6.52
CATCHMENT AREA (Ha): 243
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON LAKE ROCHFORT DAM

Large earth structure, damming Lake Stream on the slopes of Mt Rochfort. Rock armouring on upstream face.

Crest forms a large almost quarter circle shape.

Height and width vary considerably. Plans at Buller Electricity suggest maximum height of 11m - minimum is about 0.75m. Hard to get precise length and height measurements due to it not being a continuous structure (ties into a number of natural high spots) and being densely vegetated with native bush (size increases from south to north).

One of the largest dams in the region.

Low hazard. Would scour channel of Lake Stream, and some pasture damage at base of hill. May affect State Highway 67 at Fairdown 'dogleg'.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Lake Rochfort (Dam 1)
RIVER: Christmas Stream
CATCHMENT REFERENCE: 934010
MAP REFERENCE: NZMS 260 K29 Westport 043372
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation (See notes)
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Gold mine water supply and hydro electric power generation
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: S014021, C.L. Blk IX,, Kawatiri S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Late 1800's
DESIGNED BY: The General Exploration Company
BUILT BY: The General Exploration Company
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2.7+
CREST LENGTH (m): 61
METRES ABOVE SEA LEVEL: 470
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Buller Electricity, Palmerston Street, Westport

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 234 257
RESERVOIR AREA (Ha): 5.25
RESERVOIR DEPTH (m): 6.52
CATCHMENT AREA (Ha): 243
SPILLWAY DISCHARGE CAPACITY: 3m x 0.5m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON LAKE ROCHFORT (DAM 1)

See previous page for historical and ownership details.

Earth dam densely vegetated with native shrubs.

Crest is straight.

Spillway channel on true right side of structure.

Remnants of old pumphouse or powerhouse near crest.

Access is difficult - track overgrown and pipeline to powerstation removed.

Low Hazard. If this section failed, water flowing down Christmas Stream would cause extensive scouring of stream bed and vegetation. The road to the old Fairdown Power Station would more than likely be washed out and probable damage to farm land at base of hill would occur.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: I.C.I. Dam
RIVER: Un-named Swamp
CATCHMENT REFERENCE: Cape Foulwind
MAP REFERENCE: NZMS 260 K29 Westport 897364
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Imperial Chemical Industries (NZ) Ltd
ADDRESS: I.C.I., 14 Bentham Street, Westport
TELEPHONE: 
DAM PURPOSE: Gold mining(?)
RESOURCE CONSENT: Unlisted
MINING LICENCE: 
LEGAL LAND DESCRIPTION: Lot 1, DP10966, Sec 3, Blk IV, Steeples S.D.
ACCESS: Private - call I.C.I. (locked gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1900's
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3
CREST LENGTH (m): 90
METRES ABOVE SEA LEVEL: 40
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 400 000 (See notes)
RESERVOIR AREA (Ha): 40
RESERVOIR DEPTH (m): 1
CATCHMENT AREA (Ha): 500
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: y(?)
INSPECTED BY WHOM: 
NO INSPECTION: 

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: y
VERY LOW: 

NOTES ON I.C.I. DAM - CAPE FOULWIND

Not sure of original use for dam - probably gold mine supply.

Crest forms part of Seaton Road formation to I.C.I. explosive magazine.

Access - get key of I.C.I. explosives, Westport for locked gate near terrace edge.


No real spillway structure - water backs up and flows into the so called 'Gillows Dam'. Gillows dam is not a formed dam structure but a depression that gets flooded from the backup water of the I.C.I. dam. When I.C.I. dam water is low, water from Gillows Dam flows the other way, back into the I.C.I. dam - a type of self balancing system.

Low Hazard. Swamp location may cause some pastoral and minor structural damage around the Bradshow Road area at the base of the terrace (may be bordering on significant hazard).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Cape Foulwind Natural run-off
CATCHMENT REFERENCE: Cape Foulwind
MAP REFERENCE: NZMS 260 K29 Westport 912358
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE:
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: DP 10966, Sec 11, Blk IV, Steeles S.D., Gillows
Dam Wildlife Management Reserve
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early this century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 0.5m
CREST LENGTH (m): 104
METRES ABOVE SEA LEVEL: -35
FOUNDATION TYPE: Gravel - pakihi swamp
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³):
RESERVOIR AREA (Ha): -2.5
RESERVOIR DEPTH (m): 1m estimated at deepest point
CATCHMENT AREA (Ha): Immediate area around dam
SPILLWAY DISCHARGE CAPACITY:
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - CAPE FOULWIND

Very small dam in middle of swamp, between I.C.I. dam and 'Gillows Dam'.

Access - get key for locked gate of I.C.I. explosives, Westport.

Small earth structure, formed by dozed up ridges in a tri-junction formation.

Not sure of purpose.

Very low hazard - very shallow water, isolated swamp location.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Westport Water Treatment Station
RIVER: Caledonian Terrace (water diverted from Orowaiti River)/Giles Creek
CATCHMENT REFERENCE: 933000
MAP REFERENCE: NZMS 260 K29 Westport 987355
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Buller District Council
ADDRESS: Buller District Council, Brougham Street, Westport
TELEPHONE: (03) 789 7239
DAM PURPOSE: Westport water supply
RESOURCE CONSENT: 84068 - Dead. Expires 28/1/2010
MINING LICENCE:
LEGAL LAND DESCRIPTION: Water Conservation Reserve Pt 13, Blk VIII, Kawatiri S.D.
ACCESS: Private - call Buller District Council (locked gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1987
DESIGNED BY: E.A. Gordon & Partners Dunedin & Invercargill
BUILT BY: Howey Construction Ltd, Nelson
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 10
CREST LENGTH (m): 41
METRES ABOVE SEA LEVEL: ~125
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Butynol sheeting on base and upstream face
SPILLWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Buller District Council, West Coast Regional Council

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 3000
RESERVOIR AREA (Ha): 0.1681
RESERVOIR DEPTH (m): 4.1
CATCHMENT AREA (Ha): Water piped from three supply dams
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y (basically daily)
IRREGULAR:
INSPECTED BY WHOM: Buller District Council staff
NO INSPECTION:

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:

POTENTIAL HAZARD ASSESSMENT
NOTES ON WESTPORT WATER TREATMENT STATION, CALEDONIAN TERRACE

Located on terrace top - get key for locked gate off Buller District Council.

Basically used as a water filter/purification station.

Precise measurements on Inventory sheet taken off plans.

Built in a gravel pit with a gravel wall across channel depression. Reservoir is perfectly square - 41m x 41m.

Water treatment plant on 'upstream' edge of reservoir.

Water is piped to reservoir from the three old dams further inland along the terrace.

Low hazard - would cause interruption of Westport's water supply (health hazard). Would cause little structural damage - mainly to pipe line and channel scouring.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Shaddock's Dam
RIVER: Caledonian Terrace (water diverted from Orowaiti River)/Giles Creek
CATCHMENT REFERENCE: 933000
MAP REFERENCE: NZMS 260 K29 Westport 993352
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Buller District Council
ADDRESS: Buller District Council, Brougham Street, Westport
TELEPHONE: (03) 789 7239
DAM PURPOSE: Westport water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: 
LEGAL LAND DESCRIPTION: Water Conservation Reserve Pt 13, Blk VIII, Kawatiri S.D.
ACCESS: Private - call Buller District Council (locked gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1904
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2
CREST LENGTH (m): 107.5
METRES ABOVE SEA LEVEL: -130
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Buller District Council

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): (See comments)
RESERVOIR AREA (Ha): 0.6
RESERVOIR DEPTH (m): 4m at deepest point
CATCHMENT AREA (Ha): Water piped to terrace top from Orowaiti River
SPILLWAY DISCHARGE CAPACITY: 3m x 1.7m (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y (basically daily)
IRREGULAR: 
INSPECTED BY WHOM: Buller District Council staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: Y
VERY LOW:
NOTES ON SHADDOCK'S DAM - CALEDONIAN TERRACE

On terrace top, on left hand side of road (going uphill). Pakihi Swamp. Part of Westport water supply system.

Crest is L shaped. Section perpendicular to creek channel is 57.5m long: Section // to road is 50m long. Get key off Buller District Council for locked gate at base of terrace.

Water is piped to dam from Orowaiti River headwaters.

Connected to Westport Water Supply Dam 1 - self levelling system between the two dams.

Two small jetties with outlet pipes are constructed - one drains the reservoir into Giles Creek for maintenance work and the other drains water to concrete tanks for Westport's supply.

Not sure of reservoir volume. Excavated channel in middle is 4m deep - not sure of rest of reservoir depth.

Low hazard - would cause structural damage, but could inconvenience Westport's water supply, hence would pose more of a health hazard.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Westport Supply Dam No. 1
RIVER: Caledonian Terrace (water diverted from Orowaiti River)/Giles Creek
CATCHMENT REFERENCE: 933000
MAP REFERENCE: NZMS 260 K29 Westport 993351
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Buller District Council
ADDRESS: Buller District Council, Brougham Street, Westport
TELEPHONE: (03) 789 7239
DAM PURPOSE: Westport water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: Water Conservation Reserve Pt 13, Blk VIII, Kawatiri S.D.
ACCESS: Private - call Buller District Council (locked gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1904
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.2
CREST LENGTH (m): 29
METRES ABOVE SEA LEVEL: -130
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Buller District Council

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): (See comments)
RESERVOIR AREA (Ha): -1.2
RESERVOIR DEPTH (m): -4+
CATCHMENT AREA (Ha): Water piped to terrace top from Orowaiti River
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y (basically daily)
IRREGULAR:
INSPECTED BY WHOM: Buller District Council staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON WESTPORT TOWN SUPPLY DAM NO. 1 - CALEDONIAN TERRACE

Adjacent to Shaddocks Dam (previous page) and Westport Supply Dam No. 3.

On right side of road (going uphill).

Small earth dam, with wood 'fence' on upstream face.

Water piped to dam from Giles Creek, and from Shaddock's Dam.

Water goes into Westport supply dam No. 3 via control valve.

Drainage valve (for maintenance) on true left edge of reservoir drains into Ballarat Creek.

Low hazard - little or no structural damage - mainly presents a health hazard as failure could interrupt Westport's water supply.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Westport Supply Dam No. 3
RIVER: Caledonian Terrace (water diverted from Orowaiti River)/Giles Creek
CATCHMENT REFERENCE: 933000
MAP REFERENCE: NZMS 260 K29 Westport 990353
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Buller District Council
ADDRESS: Buller District Council, Brougham Street, Westport
TELEPHONE: (03) 789 7239
DAM PURPOSE: Westport water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: Water Conservation Reserve Pt 13, Blk VIII, Kawatiri S.D.
ACCESS: Private - call Buller District Council (locked gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1904
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2
CREST LENGTH (m): -155 (See comments)
METRES ABOVE SEA LEVEL: ~130
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Buller District Council

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): 13,680 (Buller District Council)
RESERVOIR AREA (Ha): ~3.2
RESERVOIR DEPTH (m): ~4m at deep excavated channel in middle
CATCHMENT AREA (Ha): Water piped to terrace top from Orowaiti River
SPILLWAY DISCHARGE CAPACITY: 1.2m x 0.7m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y (almost daily)
IRREGULAR:
INSPECTED BY WHOM: Buller District Council staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON WESTPORT TOWN SUPPLY DAM NO. 3 - CALEDONIAN TERRACE

Immediately downstream of Westport No. 1 dam (previous page) in swamp area.

Largest of the Westport supply dams.

Densely vegetated with native scrub.

Earth dam has a wooden face on upstream side - a number of years ago the earth wall nearly breached, so the wooden face was added for strength according to Buller District Council staff.

Fed by waters from Shaddock’s Dam and Dam No. 1. Water from the dam goes to the new treatment dam downstream.

Wooden face structure goes from spillway to 2nd jetty/control valve upstream (~107m long). One valve allows water to go to water treatment plant, other for drainage into Ballarat Creek for maintenance.

Spillway channel on true left, in corner of reservoir.

Low hazard - as for other supply dams. Main threat of failure would be health hazard due to Westport water supply disruption. Could cause some damage to Caledonian Terrace Road - most of dam structure runs // to road.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Un-named Creek
CATCHMENT REFERENCE: Caroline Terrace
MAP REFERENCE: NZMS 260 K29 Westport 915305
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Westport Sawmilling Company Limited
ADDRESS: Westport Sawmilling Co Ltd, Bald Hill, Coast Road
TELEPHONE: (03) 789 6932
DAM PURPOSE: Sawmill water supply
RESOURCE CONSENT: 90032 - Current. Expires 18/2/2001
MINING LICENCE:
LEGAL LAND DESCRIPTION: S0104, Secs 38, 44, 48, Blk II, Waitakere S.D.
ACCESS: Private - call Mill Manager

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1968
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3
CREST LENGTH (m): 58
METRES ABOVE SEA LEVEL: ~85
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~10000
RESERVOIR AREA (Ha): ~1
RESERVOIR DEPTH (m): 2
CATCHMENT AREA (Ha): ~120
SPILLWAY DISCHARGE CAPACITY: 1m x 0.4m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mill staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON UN-NAMED DAM - CAROLINE TERRACE

Small dam used for Westport Sawmilling Co's Timber Mill.
Situated on terrace face above mill site.
Downstream face densely vegetated.
Crest semi-circular shaped.
Fed from an un-named creek via a pipe (creek comes from Fairmaid Dam upstream).
Outlet pipe to mill goes through base of crest and under access track.
Spillway channel on true left side.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Fairmaid Dam
RIVER: Un-named Creek
CATCHMENT REFERENCE: Caroline Terrace
MAP REFERENCE: NZMS 260 K29 Westport 916298
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Westport Sawmilling Company Limited
ADDRESS: Westport Sawmilling Co Ltd, Bald Hill, Coast Road
TELEPHONE: (03) 789 6932
DAM PURPOSE: Sawmill water supply
RESOURCE CONSENT: 90032 - Current. Expires 18/2/2001
MINING LICENCE: 
LEGAL LAND DESCRIPTION: Secs 43, Blk II, Waitakere S.D., Water races, 13106, 13544
ACCESS: Private - call Mill Manager

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1900 original dam - rebuilt after failure in 1974
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 6
CREST LENGTH (m): 120
METERS ABOVE SEA LEVEL: 140
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 50000
RESERVOIR AREA (Ha): 2.5
RESERVOIR DEPTH (m): 2
CATCHMENT AREA (Ha): 50
SPILLWAY DISCHARGE CAPACITY: 3m x 1m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y (about twice a month)
IRREGULAR: 
INSPECTED BY WHOM: Mill Manager
NO INSPECTION: 

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW: 

POTENTIAL HAZARD ASSESSMENT

NOTES ON FAIRMAID DAM - CAROLINE TERRACE

Original dam failed in 1974, then rebuilt (see section 3).


On pakihi terrace top, near edge of terrace.

Access is up a private gravel road to dam - see Manager.

Spillway on true left (crest is curved). Spillway structure is a wooden culvert arrangement. Water flows over spillway into a small storage pond, then down creek channel.

Control valve in central crest area.

Actual dam surrounded by pine plantation. Pines growing on downstream batter.

Low Hazard. Based on damage of previous failure in 1974, and considering the ‘new’ dam is not as large as the old dam.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Lake Rahui
RIVER: Muddy Creek
CATCHMENT REFERENCE: 932260
MAP REFERENCE: NZMS 260 L29 Inangahua 156311
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Coal mine and timber mill water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: C.L., Lake Rahui, Sec 10, Blk I, Inangahua S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1900's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.5m
CREST LENGTH (m): 51
METRES ABOVE SEA LEVEL: ~70
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled (2 x one at each end of lake)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 200 000'
RESERVOIR AREA (Ha): 5
RESERVOIR DEPTH (m): 4m* (estimated)
CATCHMENT AREA (Ha): 256
SPILLWAY DISCHARGE CAPACITY: ~5m x 2m (crest end), unknown at Rahui Creek end
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON LAKE RAHI, MUDY CREEK - BULLER GORGE

Built early this century as a water supply for the coal mine and timber mill that worked in Muddy Creek.

Earth structure is quite small, but forms a large reservoir.

Spillway at crest end may in fact be a breach. Also a number of old water race channels exit from the crest end. At a certain level water also spills down Rahui Creek, at the upstream end of the lake.

Access difficult - cross Buller River, then long bushwalk in.

Now used for recreational shooting.

In steep sided, bush clad valley.

A small creek delta has formed on the upstream side of the dam structure (immediately adjacent to it), thus forming a wide gravel beach ‘protection zone’ for the dam structure.

Very low hazard due to gravel delta protection and isolated location. Only asset downstream is Buller gorge railway -2.8km away. However, if dam breached, water has to flow through very dense vegetation in the valley, then across an extensive, densely re-vegetated swamp (where timber was milled), before reaching railway.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Heaphy Mine Settlement Pond
RIVER: Felix Creek catchment
CATCHMENT REFERENCE: 932251
MAP REFERENCE: NZMS 260 L29 Inangahua 143251
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: L.L.W. Heaphy and Sons Limited
ADDRESS: L.L.W. Heaphy & Sons Ltd, Main Road, Buller Gorge
TELEPHONE: (Harold Clemetson (Manager) (03)7890285 (work) (03)7898483 (home)
DAM PURPOSE: Coal fines settlement pond
MINING LICENCE: ML 37 078, ML 37 098 and 37 011
LEGAL LAND DESCRIPTION: SO13957, Sec 7713, Westport Colliery Res, Blk III, Kawatiri S.D.

ACCESS: Private - call Mine Manager

STRUCTURAL DETAILS

CONSTRUCTION DATE: Pre 1984
DESIGNED BY:
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -5
CREST LENGTH (m): -30
METRES ABOVE SEA LEVEL: -95
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Controlled by culvert
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³):
RESERVOIR AREA (Ha): 0.01 (figures from resource consent application)
RESERVOIR DEPTH (m):
CATCHMENT AREA (Ha): 0.01 (figures from resource consent application)
SPILLWAY DISCHARGE CAPACITY: 3.64m³/minutes (figure from resource consent application
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mine staff and mine inspection
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
Very small dam built near workshops etc.
Traps coal fines after coal washed.
Semi-circular shaped earth ridge.
Very low hazard. Very small volume in reservoir.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Heaphy Mine Dam
RIVER: Felix Creek
CATCHMENT REFERENCE: 932251
MAP REFERENCE: NZMS 260 L29 Inangahua 144246
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: L.L.W. Heaphy and Sons Limited
ADDRESS: L.L.W. Heaphy & Sons Ltd, Main Road, Buller Gorge
TELEPHONE: Harold Clemenson (Manager) (03) 7890285 (work) (03) 7898483 (home)
DAM PURPOSE: Coal miner water supply
MINING LICENCE: 81038 - Expired 25/9/1992
LEGAL LAND DESCRIPTION: S013957, Sec 77B, Westport Colliery Res, Blk III, Kewartir S.D.

ACCESS: Private - call Mine Manager

STRUCTURAL DETAILS

CONSTRUCTION DATE: Pre 1957
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth/overburden (see notes)
CREST HEIGHT (m): See notes
CREST LENGTH (m): 175
METERS ABOVE SEA LEVEL: 1130
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³):
RESERVOIR AREA (Ha): 1
RESERVOIR DEPTH (m): 15 (at deepest point)
CATCHMENT AREA (Ha): 70
SPILLWAY DISCHARGE CAPACITY: -3m x 2.5m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mine staff and mine inspectors
NO INSPECTION:

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON HEAPHY MINE DAM - FELIX CREEK

Not sure of precise construction date - built before 1957 (when Harold Clementson, Mine Manager started working there).

Large earth dam with straight crest. Above present workings, in a small valley. Call manager for access (can drive right to it).

Original dam was ~175m long. Dam began leaking a few years ago, but has been fixed, before dumping all overburden in front of dam structure commenced. Dam is now more like a pond on a level plateau.

Dam is fed from intake channel on true right side, from Felix Creek. Spillway channel on true left.

Very low hazard. Amount of overburden dumped in front of dam would make it very unlikely to fail.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Argyle Dam
RIVER: Deep Creek
CATCHMENT REFERENCE: South of Charleston
MAP REFERENCE: NZMS 260 K30 Punakaiki 799183
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Coal mine and timber mill water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: 
LEGAL LAND DESCRIPTION: S014022, Pt Sec 26, C.L. Blk IV, Waitakere S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: ~1866
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 7.0
CREST LENGTH (m): 22
METRES ABOVE SEA LEVEL: ~120
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): See notes
RESERVOIR AREA (Ha): 5
RESERVOIR DEPTH (m): See notes
CATCHMENT AREA (Ha): 122
SPILLWAY DISCHARGE CAPACITY: 4m x 1m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR: 
INSPECTED BY WHOM: Department of Conservation staff
NO INSPECTION: 

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: Y
VERY LOW:
NOTES ON ARGYLE DAM - DEEP CREEK - CHARLESTON

In a very steep sided, densely vegetated creek channel.

One of the oldest dams in the region.

Reservoir is assumed to be very deep - not measured.

Access is via a track just off S.H. 6.

Dam structure densely vegetated with native scrub/trees.

Spillway channel carved into bed rock on true right, about 27m from dam structure.

Outlet valve/pipe at base of crest in central area = 0.4m diameter. Pipe has burst, very high pressure 'foundation' emptying from pipe - about 6m high.

Department of Conservation staff (Westport) have tried to seal pipe with concrete - not working.

Low hazard: Where Deep Creek meets coastal cliffs is a popular area for rock climbing, thus people could be endangered. Would cause extensive scouring of creek channel and native bush.

SEE DIAGRAM OPPOSITE
ARCHYLE DAM, DEEP CREEK

CROSS SECTION AT OUTLET PIPE

PLAN OF DAM AND SPILLWAY CHANNEL
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Government Dam
RIVER: Deep Creek
CATCHMENT REFERENCE: South of Charleston
MAP REFERENCE: NZMS 260 K30 Punakaiki 803173
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Coal mine and timber mill water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: SO14022, C.L. State Forest, Charleston Amenity Area, Blks VI and IX
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: ~1800's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
Crest HEIGHT (m): 3
Crest LENGTH (m): 33
METRES ABOVE SEA LEVEL: -160
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Homogeneous earth (earth blanket on upstream face)
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m^3): 120 000 (M.O.C. 1988 Figures)
RESERVOIR AREA (Ha): 41
RESERVOIR DEPTH (m):
CATCHMENT AREA (Ha): 352
SPILLWAY DISCHARGE CAPACITY: (See notes)
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR: N
INSPECTED BY WHOM: Department of Conservation staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT: Y
LOW:
VERY LOW:
NOTES ON GOVERNMENT DAM - DEEP CREEK - CHARLESTON

Built in a large natural depression.

Dam structure is relatively small, but reservoir area is one of the largest in the region.

One of dams recorded in Ministry of Commerce (1988) report.

Dam structure densely vegetated with gorse and native scrub.

Graded rock on downstream face. Appears to be an earth blanket on upstream face for sealing - more vegetation on upstream face.

NIWAR water level recorder on true left abutment.

Spillway channel flows through a tunnel under Four Mile Road. (Tunnel goes for many km around Charleston gold fields).

Overgrown water race channel out along true right bank of Deep Creek channel.

Access difficult - either by overgrown track from S.H. 6 or up overgrown water race in Deep Creek channel.

Low Hazard. Would most likely wash out S.H. 6 at culvert over Deep Creek (about 550m away). Extensive scouring of channel and vegetation would occur. Influx of water into Argyle Dam could possibly burst that dam (see notes previous page).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Progress Dam
RIVER: Deep Creek tributary
CATCHMENT REFERENCE: South of Charleston
MAP REFERENCE: NZMS 260 K30 Punakaiki 789172
AERIAL PHOTO. REFERENCE: 
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Coal mine and timber mill water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: 
LEGAL LAND DESCRIPTION: SO14022, Sec 88, Blk VI, Waitakere S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: -1866
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -3
CREST LENGTH (m): -126
METRES ABOVE SEA LEVEL: -195
FOUNDATION TYPE: 
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 
RESERVOIR AREA (Ha): -4
RESERVOIR DEPTH (m): -0.5 - 2 (at deepest central channel)
CATCHMENT AREA (Ha): 50
SPILLWAY DISCHARGE CAPACITY: 2m x 2m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: Y
INSPECTED BY WHOM: Department of Conservation staff
NO INSPECTION: 

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: Y 
VERY LOW: 

NOTES ON PROGRESS DAM - DEEP CREEK - CHARLESTON

Built on Pakihi Terrace top, immediately adjacent to S.H. 6.

Structure densely vegetated with gorse, heather, bracken.

Spillway channel flows from near true right side - uncontrolled channel flows into pakihi swamp.

Reservoir area fluctuates considerably and quickly. Can be almost empty, then have about 2m of water in it a few days later.

Low hazard. Due to swamp location. Most water would be absorbed by swamp if failure occurred. A possibility some damage may occur to S.H. 6.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Besson's Dam
RIVER: Limestone Creek
CATCHMENT REFERENCE: 923100
MAP REFERENCE: NZMS 260 K30 Punakaiki 763042
AERIAL PHOTO. REFERENCE:
DISTRICT: Buller

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast United Mines Limited
ADDRESS: C/- P.O. Box 9892 Newmarket, Auckland
TELEPHONE:
DAM PURPOSE: Coal mine water supply
RESOURCE CONSENT: 78027 - Expired 5/12/1991
MINING LICENCE:
LEGAL LAND DESCRIPTION: Pt 24, and C.L. Pt 10, BlkV, Brighton S.D.
ACCESS: Public (via creek bed)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1920's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2.3
CREST LENGTH (m): 16.3
METRES ABOVE SEA LEVEL: 240
FOUNDATION TYPE: Limestone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled (2x)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 12500
RESERVOIR AREA (Ha): 2.5
RESERVOIR DEPTH (m): 0.5
CATCHMENT AREA (Ha): 50
SPILLWAY DISCHARGE CAPACITY: 5m x 0.7m (true right abutment), 1m x 1m (true left abutment)
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON BESSON'S DAM - LIMESTONE CREEK - PUHATANE

In headwaters of Limestone Creek. Access difficult, either up creek bed or follow old water race - long walk.

Brighton coal mine water supply.

Dam structure breached (looks relatively recent) - still holds water. Breach in central crest area where PVC outlet pipe exits dam.

Spillway channels at each abutment. Main one on true right - carved into bedrock.

Obviously held a lot more water before breach (vegetation indicators) now very shallow.

One of dams recorded in Ministry of Commerce (1988) report, although that report gives very few details.

Very low risk: Due to isolated location, breach in crest and small volume of water held.
Grey District
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named (Nobles Creek 1)
RIVER: Natural runoff (Nobles Creek catchment)
CATCHMENT REFERENCE: 914301
MAP REFERENCE: NZMS 260 K31 Ahaura 023735
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: MRM Mining Limited
ADDRESS: M.B.D. Jellie, Coal Creek, Greymouth
TELEPHONE: (03) 768 7105
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
LEGAL LAND DESCRIPTION: S011514, Pt Res 1597 and 1694, Pt bed of Nobles Creek Bik III, Ahaura S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1990
DESIGNED BY:
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 4
CREST LENGTH (m): 34
METRES ABOVE SEA LEVEL: -190
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -974
RESERVOIR AREA (Ha): -0.065
RESERVOIR DEPTH (m): -1.5
CATCHMENT AREA (Ha): -0.065
SPILLWAY DISCHARGE CAPACITY: 2 x 300mm diameter pipes (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON 2 NOBLES CREEK DAMS

Access difficult - via Nobles Creek River bed.

Roughly constructed dozed-up gravel ridges, badly eroded around outlet pipes.

Built on unconsolidated gravel.

Lower Dam (1) fed by water from Upper Dam (2).

Hasn't been maintained for about 18 months (mine not working).

Small water volume and isolated creek bed location = very low hazard.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named (Nobles Creek 2)
RIVER: Natural run-off (Nobles Creek catchment)
CATCHMENT REFERENCE: 914301
MAP REFERENCE: NZMS 260 K31 Ahaura 022735
AERIAL PHOTO. REFERENCE: 
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: MRK Mining Limited
ADDRESS: M.D.B. Jellie, Coal Creek, Greymouth
TELEPHONE: (03) 768 7195
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
LEGAL LAND DESCRIPTION: S011514, Pt Res 1597 and 1694, Pt bed of Nobles Creek, Blk III, Ahaura S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1990
DESIGNED BY: 
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 4
CREST LENGTH (m): 33
METRES ABOVE SEA LEVEL: -190
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No true spillway - outlet pipes = 2 x 200mm
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 319
RESERVOIR AREA (Ha): 0.957
RESERVOIR DEPTH (m): 0.3
CATCHMENT AREA (Ha): 0.957
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named (Napoleon Hill 1)
RIVER: Natural runoff (Orwell Creek catchment)
CATCHMENT REFERENCE: 914191
MAP REFERENCE: NZMS 260 K31 Ahuman 015701
AERIAL PHOTO REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Alan McInroe
ADDRESS: Alan McInroe, Totara Flat
TELEPHONE: (03) 732 3737
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
LEGAL LAND DESCRIPTION: Granville Forest, Legal road, 5011058, Reserve 1694,
Blk III, Ahaura S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1989
DESIGNED BY:
BUILT BY: Keep It Dark Enterprises
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3.5
CREST LENGTH (m): 53
METRES ABOVE SEA LEVEL: 210
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Controlled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 5725 - 7155
RESERVOIR AREA (Ha): 0.28
RESERVOIR DEPTH (m): 1 - 1.5
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 360mm x 55mm (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON NAPOLEON HILL 1 - ORWELL CREEK ROAD

Adjacent to Orwell Creek Road

Timberlands Land

2 x 200mm diameter outlet pipes removed (existing from control grate).

Water supply from No. 2 dam immediately adjacent.

Very low hazard - water would flow through mined swamp area - road level higher than crest level.

Structure becoming overgrown with gorse.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named (Napolean Hill 2)
RIVER: Natural runoff (Orwell Creek catchment)
CATCHMENT REFERENCE: 914191
MAP REFERENCE: NZMS 260 K31 Ahaura 016701
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Alan McInroe
ADDRESS: Alan McInroe, Totara Flat
TELEPHONE: (03) 732 3737
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
LEGAL LAND DESCRIPTION: Granville State Forest, Legal road, S011058, Reserve 1694, Blk III, Ahaura S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1989
DESIGNED BY:
BUILT BY: Keep It Dark Enterprises
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3.5
CREST LENGTH (m): 96
METRES ABOVE SEA LEVEL: -215
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Controlled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -1077 - 2155
RESERVOIR AREA (Ha): -0.2155
RESERVOIR DEPTH (m): -0.5 - 1.0
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 2 x 200mm diameter pipes
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
L shaped structure

Crest section // to Orwell Road = 36.5m long and 3.5m high at corner of crest. Section // to Orwell Creek = 59m long and 2.4m high.

Outlet pipes = 2 x 200mm pipes through base of dam, near L shaped corner, adjacent to road. Pipe went across concrete structure to dam 1 downstream stream. Pipes removed.

Structure becoming overgrown with gorse.

Very low hazard; small amount of water being held.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Paparoa Creek
CATCHMENT REFERENCE: 914141
MAP REFERENCE: NZMS 260 K31 Ahaura 748705
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Francis Mining Limited
ADDRESS: Brett Moynahan (Manager), 112 Marsden Road, Greymouth
TELEPHONE: (03) 768 0999 (work), (03) 768 6733 (home)
DAM PURPOSE: Creek diversion
LEGAL LAND DESCRIPTION: State Coal Mines Res, B1k 1, Mawheranui S.D.

ACCESS: Private (call manager)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1992 - 1993
DESIGNED BY: Carryer and Associates, P.O. Box 15483, New Lynn, Auckland
BUILT BY: Francis Mining Limited, Downer Construction Limited
CONSTRUCTION TYPE: Earth - rock fill
CREST HEIGHT (m): 100
CREST LENGTH (m): 180
METRES ABOVE SEA LEVEL: -380
FOUNDATION TYPE: Coal measure sandstones/siltstones
SEALING POSITION AND MATERIAL: Homogeneous earth - rockfill
SPILLWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Francis Mining Limited, West Coast Regional Council

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): See notes
RESERVOIR AREA (Ha): See notes
RESERVOIR DEPTH (m): See notes
CATCHMENT AREA (Ha): 8
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y (continuously during working hours)
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON PAPAROA CREEK DIVERSION DAM - ROA MINE

Built in headwaters of Paparoa Creek - diverting Paparoa Creek from original channel - no ponded reservoir behind 'dam'.

Constructed of overburden being dumped in original Paparoa Creek channel, confined to steep sided valley.

Supposed to be finished in March 1993 - will contain 1.3 million m$^3$ of material.

Monitored constantly - especially downstream face for bulging or cracking.

Low hazard - If Paparoa Creek flooded and diverted back to original channel, back cutting and possible collapse of the infill may occur, causing sedimentation problems in creek downstream. Some machinery could be endangered if parked on infill.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff (Eight Mile Creek catchment)
CATCHMENT REFERENCE: 912070
MAP REFERENCE: NZMS 260 J31 Greymouth 662698
AERIAL PHOTO. REFERENCE: Grey
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: G.A. McTaggart Estate
ADDRESS: C/- Vic Hawker, Main Road, Blackball
TELEPHONE: (03) 732 471
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT AND STATUS: 87003 - Dead. Expires 15.3.1995
MINING LICENCE: ML 32 1876 - Surrendered
LEGAL LAND DESCRIPTION: S011209, Rural Sec 6692, Blk 11, Cobden S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Late 1980’s
DESIGNED BY:
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2
CREST LENGTH (m): 42
METRES ABOVE SEA LEVEL: -135
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): ~1500
RESERVOIR AREA (Ha): ~0.1
RESERVOIR DEPTH (m): ~1.5
CATCHMENT AREA (Ha): ~0.1
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON 8 MILE CREEK DAM - RAPAHOE

Very small, roughly constructed.

On Department of Conservation land.

Spillway exits from true right of dam.

Dam located in a mined area surrounded by bush.

Very low hazard - no assets around, very small reservoir.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME:  Un-named
RIVER:  Un-named (Darkies Terrace, Pt Elizabeth)
CATCHMENT REFERENCE:  Darkies Terrace, Point Elizabeth
MAP REFERENCE:  NZMS 260 J31 Greymouth 635674
AERIAL PHOTO REFERENCE:
DISTRICT:  Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR:  Department of Conservation
ADDRESS:  Department of Conservation, Sewell Street, Hokitika
TELEPHONE:  (03) 755 8301
DAM PURPOSE:  Gold mine water supply
RESOURCE CONSENT:  Unlisted - historical
MINING LICENCE:
LEGAL LAND DESCRIPTION:  Rapahoe Range Scenic Reserve, Pt Res 974, Blk II, Cobden S.D.
ACCESS:  Public

STRUCTURAL DETAILS

CONSTRUCTION DATE:  Last century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE:  Earth
CREST HEIGHT (m):  3.5
CREST LENGTH (m):  51
METERS ABOVE SEA LEVEL:  -100
FOUNDATION TYPE:  Gravel
SEALING POSITION AND MATERIAL:  Homogeneous earth
SPILLWAY TYPE:  Uncontrolled
PERMANENT/TEMPORARY STRUCTURE:  Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$):  see notes
RESERVOIR AREA (Ha):  see notes
RESERVOIR DEPTH (m):  see notes
CATCHMENT AREA (Ha):  see notes
SPILLWAY DISCHARGE CAPACITY:  3.6m x 1m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:  Y
IRREGULAR:  
INSPECTED BY WHOM:  Department of Conservation staff
NO INSPECTION:

HIGHEST:
SIGNIFICANT:
LOW:
VERY LOW:  Y

POTENTIAL HAZARD ASSESSMENT
NOTES ON DARKIES TERRACE DAM - DARKIES TERRACE

On Department of Conservation, Pt Elizabeth walkway.

No permanent reservoir.

Densely vegetated with natives.

Holds a small amount of water after heavy rain.

Spillway at true right of crest.

Dam not used for many years.

Very low hazard: isolated and small reservoir.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Colls Dam
RIVER: Gows Creek
CATCHMENT REFERENCE: 914150
MAP REFERENCE: NZMS 260 K31 Ahaura 886657
AERIAL PHOTO. REFERENCE: 14/102 Sheet 2. Flown 19.4.1979
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted - historical
MINING LICENCE:
LEGAL LAND DESCRIPTION: SO11209 CL Pt Hochstetter State Forest 26, Pt Res 1695 Blk VII, Ahaura S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Last century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): See notes (probably <3m)
CREST LENGTH (m): -24
METRES ABOVE SEA LEVEL: 90
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -9750 - 13000
RESERVOIR AREA (Ha): -0.65
RESERVOIR DEPTH (m): - 1.5 - 2
CATCHMENT AREA (Ha): 940
SPILLWAY DISCHARGE CAPACITY: 2m x 0.9m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR: 
INSPECTED BY WHOM: Department of Conservation staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
NOTES ON COLLS DAM - NELSON CREEK

On Department of Conservation, Nelson Creek walkway.

Built in steep sided channel.

Dam structure heavily vegetated with natives.

Bank erosion around dam make precise measurements difficult.

Dam not used for many years.

Spillway on true right against vertical gravel cliff.

Very low hazard. If failed water would flow via Gows Creek into Nelson Creek.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Flax Swamp (Coal Creek Farm Settlement area)
CATCHMENT REFERENCE: 914000
MAP REFERENCE: NZMS 260 J31 Greymouth 691610
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Fish and Game Council
ADDRESS: West Coast Fish and Game Council, 23 Sale Street, Hokitika
TELEPHONE: (03) 755 8546
DAM PURPOSE: Wildlife habitat
RESOURCE CONSENT: 80007 - Dead. Expires 25.2.1999
MINING LICENCE: 
LEGAL LAND DESCRIPTION: Pt Sec 16, Blk V, Cobden S.D.
ACCESS: Private (call Kart Club or Fish and Game Council for key to padlock)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1981
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.5
CREST LENGTH (m): 48
METRES ABOVE SEA LEVEL: -75
FOUNDATION TYPE: Gravel - pakihi swamp
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -1500
RESERVOIR AREA (Ha): -0.15
RESERVOIR DEPTH (m): 1
CATCHMENT AREA (Ha): Immediate swamp area
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY): 

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: 
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
3 very small dams built in a line for duck shooting ponds.

In middle of a large swamp on terrace top.

Access via road to Westland Kart Club.

Structures heavily vegetated with gorse and scrub.

Very low hazard - small volume of water and location in middle of swamp.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Flax Swamp (Coal Creek Farm Settlement area)
CATCHMENT REFERENCE: 914000
MAP REFERENCE: NZMS 260 J31 Greymouth 691610
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Fish and Game Council
ADDRESS: West Coast Fish and Game Council, 23 Sale Street, Hokitika
TELEPHONE: (03) 755 8546
DAM PURPOSE: Wildlife habitat
RESOURCE CONSENT: 8007 - Dead. Expires 25.2.1999
MINING LICENCE:
LEGAL LAND DESCRIPTION: Pt Sec 16, Blk V, Cobden S.D.
ACCESS: Private (call Kart Club or Fish and Game Council for key to padlock)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1981
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.5
CREST LENGTH (m): 104
METRES ABOVE SEA LEVEL: -75
FOUNDATION TYPE: Gravel - pakihi swamp
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): -6400
RESERVOIR AREA (Ha): -0.64
RESERVOIR DEPTH (m): -1
CATCHMENT AREA (Ha): Immediate swamp area
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: 
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Flax Swamp (Coal Creek Farm Settlement area)
CATCHMENT REFERENCE: 914000
MAP REFERENCE: NZMS 260 J31 Greymouth 691610
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Fish and Game Council
ADDRESS: West Coast Fish and Game Council, 23 Sale Street, Hokitika
TELEPHONE: (03) 755 8546
DAM PURPOSE: Wildlife habitat
RESOURCE CONSENT: 80007 - Dead. Expires 25.2.1999
MINING LICENCE:
LEGAL LAND DESCRIPTION: Pt Sec 16, Blk V, Cobden S.D.
ACCESS: Private (call Kart Club or Fish and Game Council for key to padlock)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1981
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.5
CREST LENGTH (m): 56
METRES ABOVE SEA LEVEL: -75
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 3800
RESERVOIR AREA (Ha): -0.38
RESERVOIR DEPTH (m): -1
CATCHMENT AREA (Ha): Immediate swamp area
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Arnold Dam
RIVER: Arnold River
CATCHMENT REFERENCE: 914060
MAP REFERENCE: NZMS 260 K32 Lake Brunner 795520
AERIAL PHOTO. REFERENCE: 914/61 Sheet 2. Flown 3.4.1973
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Electricity Corporation of NZ Limited
ADDRESS: C/- Electricorp, Arnold Valley Road, Kaimata
TELEPHONE: (03) 768 6145
DAM PURPOSE: Hydro-electric power generation
RESOURCE CONSENT: 69147 - Current. Expires 1/10/2001
MINING LICENCE:
LEGAL LAND DESCRIPTION:

ACCESS: Private (call staff for key to gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1932
DESIGNED BY: Vickerman and Lancaster Limited, Wellington
BUILT BY:
CONSTRUCTION TYPE: Concrete
CREST HEIGHT (m): 14
CREST LENGTH (m): 145
METRES ABOVE SEA LEVEL: -80
FOUNDATION TYPE: Gravel, sand - silt
SEALING POSITION AND MATERIAL: Internal core
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: Electricorp

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): (?)
RESERVOIR AREA (Ha): 40
RESERVOIR DEPTH (m): (?)
CATCHMENT AREA (Ha): 57400
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Electricorp staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT: Y
LOW:
VERY LOW:
NOTES ON ARNOLD DAM - ARNOLD RIVER

Located in deeply incised section of Arnold River.

Access via gravel road and locked gate.

One of largest, if not the largest on West Coast.

Most of dam is concrete although small section on true left abutment is an earth bank.

Most information on inventory sheet from Ministry of Commerce (1988) report. Ministry of Commerce give low hazard rating - may be bordering on significant.

Exact reservoir details are held on plan by Electricorp but plans whereabouts unsure.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Hochstetter Dam
RIVER: Nelson Creek
CATCHMENT REFERENCE: 914150
MAP REFERENCE: NZMS 260 K32 Lake Brunner 976597
AERIAL PHOTO. REFERENCE: 
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted - registered historic site
MINING LICENCE: 
LEGAL LAND DESCRIPTION: Hochstetter State Forest Res 2031, Pt Res 1599 BLK X
Ahaura S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Last century
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -8.5
CREST LENGTH (m): 70
METRES ABOVE SEA LEVEL: ~250
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): See notes
RESERVOIR AREA (Ha): See notes
RESERVOIR DEPTH (m): See notes
CATCHMENT AREA (Ha): 29.5
SPILLWAY DISCHARGE CAPACITY: 30m x 1m+
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: Y
INSPECTED BY WHOM: Department of Conservation staff
NO INSPECTION: 

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
Located on Department of Conservation walkway, on Lake Hochstetter Road.

Dam was 'blown' by John Hart many years ago to lower the lake for recreation purposes. The breach of the true right side is 8-10m wide.

Old spillway channel runs around true left side of dam, re-entering Nelson Creek downstream of the dam. Water probably hasn't been down spillway for many years.

No permanent reservoir behind dam since breach, but silt in vegetation in old reservoir basin indicates a small amount of water backs up behind the structure in flood event.

Given very low hazard rating due to breach and isolated, undeveloped stream channel downstream of dam.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Saltwater Creek tributary
CATCHMENT REFERENCE: 913000
MAP REFERENCE: NZMS 260 J32 Hokitika 595512
AERIAL PHOTO REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Bernie Monk
ADDRESS: 178 Main South Road, Greymouth
TELEPHONE: (03) 768 5200
DAM PURPOSE: Plywood Factory water supply (I.P.L.)
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: Lot 1, DP2708, BLK XVI, Greymouth S.D.
ACCESS: Private (call Bernie Monk or Gun Club for key to padlocked gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1930's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Concrete
CREST HEIGHT (m): ~6.6
CREST LENGTH (m): 29.2
METRES ABOVE SEA LEVEL: ~30
FOUNDATION TYPE: Sandstone
SEALING POSITION AND MATERIAL: Solid concrete
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: This report

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~9000 (based on average depth of 1.8m)
RESERVOIR AREA (Ha): 0.5
RESERVOIR DEPTH (m): 2.6 (at dam structure - shallows upstream to 1m)
CATCHMENT AREA (Ha): 146
SPILLWAY DISCHARGE CAPACITY: 4m x 1.2m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON BERNIE MONK'S (I.P.L.) DAM - RUTHERGLEN

Located on Bernie Monks farm, near Gun Club shooting range (get key from Bernie Monk for gate).

Dam built in deeply incised creek channel - friable and permeable sandstone foundation. Crest at ground level.

Concrete dam. Spillway in central crest. Also a control gate on true left side, beside spillway.

Water leaking between concrete and sandstone foundation on true right abutment. Base of dam is concrete aggregate. Aggregate cracked and sizeable blocks have broken off and washed downstream.

Reservoir very long and narrow - confined to deep creek channel.

Dam originally built to supply Olgie’s sawmill at Gladstone: Is now used for I.P.L. Plywood Factory water supply. Water goes to factory via a tunnel through the hills.

Very low risk. If failed water would be confined to creek channel, then ending up in main Saltwater Creek channel.

SEE DIAGRAM OPPOSITE FOR STRUCTURAL DETAILS.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff (Infants Creek catchment)
CATCHMENT REFERENCE: 913010
MAP REFERENCE: NZMS 260 J32 Hokitika 605507
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Historical and Mechanical Society
ADDRESS: P. Ballock (Manager), Shantytown, Rutherglen Road, Westland
TELEPHONE: (03) 762 634 (work) (03) 762 6522 (home)
DAM PURPOSE: Shantytown supply
MINING LICENCE: ML 32 400 - current expires 28.8.2019
LEGAL LAND DESCRIPTION: Lot 3, DP2830, RS3289, 4474, Pt Rs 3282 Blk II, Waimea S.D.

ACCESS: Public during business hours

STRUCTURAL DETAILS

CONSTRUCTION DATE:
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.4
CREST LENGTH (m): 26
METRES ABOVE SEA LEVEL: -60
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -327
RESERVOIR AREA (Ha): -0.015
RESERVOIR DEPTH (m): -2.2
CATCHMENT AREA (Ha): -0.07
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Shantytown staff
NO INSPECTION:

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON SHANTYTOWN DAM

Very small dam, on terrace above Shantytown gold panning area.

Dam crest is curved, forming a circular shaped reservoir.

Water is brought to the dam via a 7.6cm diameter pipe from Infants Creek dam. No spillway - water is pumped out.

Low hazard - If dam failed on true right side water would flow down old channel into Infants Creek. If failure occurred on true left, water may go down into gold panning area.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Infants Creek
CATCHMENT REFERENCE: 913010
MAP REFERENCE: NZMS 260 J32 Hokitika 605505
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Historical and Mechanical Society
ADDRESS: P. Ballock (Manager), Shantytown, Rutherglen Road, Westland
TELEPHONE: (03) 762 6634 (work) (03) 762 6522 (home)
DAM PURPOSE: Shantytown supply/Goldmine supply
LEGAL LAND DESCRIPTION: Lot 3, DP2830, RS3289, 4474, Pt Rs 3289 Blk II, Waimea S.D.

ACCESS: Public during business hours

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early this century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3.3
CREST LENGTH (m): 24
METRES ABOVE SEA LEVEL: -50
FOUNDATION TYPE: Siltstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³):
RESERVOIR AREA (Ha):
RESERVOIR DEPTH (m):
CATCHMENT AREA (Ha): 209
SPILLWAY AREA (m²): 6m x 0.45m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR: Y
INSPECTED BY WHOM: Shantytown staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON INFANTS CREEK DAM - SHANTYTOWN

Located across Infants Creek channel near upstream end of Shantytown railway line.

Old dam originally built for Infants Creek sawmill. Now used for Shantytown sluicing operations and supply.

Structure is densely vegetated.

Built on solid siltstone foundation.

Spillway on true right side: A plank held by steel stakes crosses the spillway channel. After crossing this, the water flows over a waterfall about 3m high.

Very low risk. If failed water would flow down steep sided, densely vegetated creek channel. About 1.5-2km downstream is culvert under Rutherglen Road. There is a slight chance this could get blocked with debris and damage the road.
Irishmans Dam
Irishmans Creek
912040
NZMS 260 J32 Hokitika 665477
Grey

Timberlands (West Coast) Limited
Timberlands, Grey District Council Chambers, 105 Tainui St, Greymouth
(03) 768 0013
Road formation (and fire fighting)
Unlisted
Nemona State Forest, Pt G, Pt Rural Sec 16275, Blk I, Hohonu S.D
Public

Earth
7
110
~75
Siltstone
Homogeneous earth
Uncontrolled
Permanent

Reservoir Volume (m³):
Reservoir Area (Ha):
Reservoir Depth (m):
Catchment Area (Ha):
Spillway Discharge Capacity (MAX. FLOOD): 1.86m x 2.23m

Regular:
Irregular:
No Inspection: Y

Regular:
Irregular:
Significant:
Low:
Very Low:
NOTES ON IRISHMANS DAM - MARSDEN

Dam is curved - forms the corner section of the road.

Large concrete culvert goes through dam/road. Culvert base is quite a height off the creek bed, hence a sizeable reservoir builds up to culvert level.

On downstream side of dam/road is a concrete spillway.

Dam located in steep side channel.

Low risk. If culvert blocked, road could get washed out.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: No-name Dam
RIVER: No-name Creek
CATCHMENT REFERENCE: 912000
MAP REFERENCE: NZMS 260 J32 Hokitika 642477
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: David Palmer (landowner) Antrim Mining Ltd (operator)
ADDRESS: Gerald McArthy (Manager Antrim Mining)
TELEPHONE: (03) 768 5088
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: ML 32 377 - Current. Expires 7.12.95
LEGAL LAND DESCRIPTION: Sec 1, S011756, Marsden Blk IV, Waimea S.D.

ACCESS: Private

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1860’s (original structure) - extended in early 1980’s
DESIGNED BY: Extensions by Brian Piner
BUILT BY: Extensions by Brian Piner
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 4
CREST LENGTH (m): -280
METRES ABOVE SEA LEVEL: -60
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m^3): -9000
RESERVOIR AREA (Ha): -0.9
RESERVOIR DEPTH (m): -1
CATCHMENT AREA (Ha): (?)
SPILLWAY DISCHARGE CAPACITY: 5.5m x 0.6m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON NO-NAME DAM - MARSDEN

Very old dam on terrace above No-name Road, amongst dense scrub and gorse.

Dense gorse covering.

Spillway exits true right side.

Dam was extended in early 1980’s by Brian Piner, substantially increasing size of original structure. Original spillway was supposed to have been on true left side (No-name Road side).

Land and dam recently purchased by David Palmer, who wants to build a house on the true right side (the spillway side). Also wants to clear vegetation of dam and landscape it, as a main feature for the house.

Water is being used by Antrim Mining Ltd.

Low risk. Only asset at minor risk is No-name Road immediately downstream over terrace edge (about 100-150m away). Between the dam and the road is thick vegetation/swamp.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural run-off (Saltwater Creek tributary)
CATCHMENT REFERENCE: 913000
MAP REFERENCE: NZMS 260 J32 Hokitika 623514
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Faulkner and Fairhall
ADDRESS: Clive Fairhall, Welshmans Road, Paroa
TELEPHONE: (03) 762 6784
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
LEGAL LAND DESCRIPTION: Rural sec 3276, Blk IV, Waimea S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1992 - 1993
DESIGNED BY:
BUILT BY: Clive Fairhall
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.5
CREST LENGTH (m): 27
METRES ABOVE SEA LEVEL: ~60
FOUNDATION TYPE: Mudstone/Clay
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~10 000
RESERVOIR AREA (Ha): ~1
RESERVOIR DEPTH (m): 1 - 1.5
CATCHMENT AREA (Ha): ~ 1
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mine staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
Small recently built dam.

Roughly built - dozed up gravel ridge.

Reservoir spread amongst piles of gravel/tailings.

Water is pumped to top of terrace to mine site.

Very low hazard. If burst water would flow into creek.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural run-off (Saltwater Creek tributary)
CATCHMENT REFERENCE: 913000
MAP REFERENCE: NZMS 260 J32 Hokitika 628507
AERIAL PHOTO REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Graham Jacobs (see notes)
ADDRESS: Mawheraiti
TELEPHONE: (03) 732 8300
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 78015 - Current. Expires 27.5.2001 (see notes)
MINING LICENCE: ML 32 763 - Current. Expires 27.5.2001
LEGAL LAND DESCRIPTION: Sec 5573, Blk IV, Waimea S.D. (?)

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early this century (?)
DESIGNED BY:
BUILT BY: New section built by Clive Fairhall
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2.6
CREST LENGTH (m): 114
METRES ABOVE SEA LEVEL: -80
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -4500
RESERVOIR AREA (Ha): -0.75
RESERVOIR DEPTH (m): -0.6
CATCHMENT AREA (Ha): -0.75
SPILLWAY DISCHARGE CAPACITY: 2.2m x 0.75m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mine staff
NO INSPECTION:
POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON GRAHAM JACOBS DAM 1 - WELSHMANS ROAD

Old small dam adjacent to north side of Welshmans Road. Last 30'm built by Clive Fairhall recently.

On Dunwoodies licence which Jacobs has recently bought, but Fairhall been using water.

Roughly constructed, densely vegetated.

Spillway channel exits true left side then flows // between road and crest.

Dam built on flat, mined terrace.

Much of reservoir has been infilled from silting and tailings being dumped - original reservoir ~1.5ha according to water right file.

Very low hazard. Sudden dam failure may cause slight damage to gravel section of Welshmans Road. This section of road is mainly used for mine access.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural run-off (Saltwater Creek catchment)
CATCHMENT REFERENCE: 913000
MAP REFERENCE: NZMS 260 J32 Hokitika 628506
AERIAL PHOTO. REFERENCE: 
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Graham Jacobs (see notes)
ADDRESS: Mawheraiti
TELEPHONE: (03) 732 8300
DAM PURPOSE: Gold mine water supply, settling pond
RESOURCE CONSENT: 78015 - Current. Expires 27.5.2001 (see notes)
MINING LICENCE: ML 32 763 - Current. Expires 27.5.2001
LEGAL LAND DESCRIPTION: Sec 5573, Blk IV, Waimea S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early this century (?)
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2.3
CREST LENGTH (m): 117
METRES ABOVE SEA LEVEL: -80
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~600
RESERVOIR AREA (Ha): ~0.1
RESERVOIR DEPTH (m): ~0.6
CATCHMENT AREA (Ha): 
SPILLWAY DISCHARGE CAPACITY: 1m diameter pipe
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR: 
INSPECTED BY WHOM: Mine staff
NO INSPECTION: 

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
NOTES ON GRAHAM JACOBS DAM 2 - WELSHMANS ROAD

Small, old dam built on south side of Welshmans Road, directly opposite Dam 1 (previous page).

Roughly constructed. Leaking between 37 and 55m from true left end. Been repaired by Clive Fairhall a couple of times.

Still leaking into old spillway channel which runs // to crest and road. Old spillway has been filled in at crest and diverted. Now exits from true right end and through 1m diameter culvert under road.

Dense gorse cover.

Appears to be uncompacted earth.

Reservoir silled up. Water level only about 0.5m below crest level.

Very low hazard rating. (see previous page for potential damage and ownership details).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Deep Creek tributary (Bell Hill)
CATCHMENT REFERENCE: 914065
MAP REFERENCE: NZMS 260 K32 Lake Brunner 955495
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: South Pacific Mining Limited (defunct)
ADDRESS:
TELEPHONE:
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: ML 32 1371 - Surrendered
LEGAL LAND DESCRIPTION: Pt Res 1660 Blk I, Kopara S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE:
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3
CREST LENGTH (m): 14
METRES ABOVE SEA LEVEL: -350
FOUNDATION TYPE: Greywacke
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -1200
RESERVOIR AREA (Ha): -0.06
RESERVOIR DEPTH (m): -2
CATCHMENT AREA (Ha): -200
SPILLWAY DISCHARGE CAPACITY: 1.5m x 0.5m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: Y
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON SOUTH PACIFIC MINING DAM - BELL HILL

On timberlands on north west face of Bell Hill.

South Pacific mining gone broke, a London based Company holding bond for restoration has also gone broke. Dam is supposed to be demolished when and if restoration occurs.

Dam built in small, steep sided densely vegetated tributary of Deep Creek.

Built on shattered greywacke foundations.

Spillway is a small channel through crest top.

Very low hazard - small reservoir and no assets immediately downstream.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Deep Creek (New River tributary)
CATCHMENT REFERENCE: 912000
MAP REFERENCE: NZMS 260 J32 Hokitika 616467
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Birchfield Brothers Mining Limited
ADDRESS: Alan Birchfield, 6 Jamieson Road, Greymouth
TELEPHONE: (03) 768 7464
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: ML 32 1712 - Surrendered
LEGAL LAND DESCRIPTION: S010571 Rural Sec 5178, Blk IV, Waimea S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Late 1980's
DESIGNED BY:
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): ~3
CREST LENGTH (m): 92
METRES ABOVE SEA LEVEL: -60
FOUNDATION TYPE: Siltstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -
RESERVOIR AREA (Ha): -1.3
RESERVOIR DEPTH (m): ~2+ near crest - shallows upstream
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 2.7m x 1.5m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: Y
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON BIRCHFIELD’S DAM DEEP CREEK - CAMERONS

Located in middle of extensive mined area.

On siltstone foundation.

Spillway carved into siltstone on true left, flows over a ‘waterfall’.

Hasn’t been used for many months.

*Very* low hazard. If failed would flow onto mined area. Much of reservoir has dried up, although water still quite deep at crest.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Cockabulla Creek
CATCHMENT REFERENCE: 912060
MAP REFERENCE: NZMS 260 J32 Hokitika 701483
AERIAL PHOTO. REFERENCE: 
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Timberlands West Coast Limited (See notes)
ADDRESS: Timberlands, Grey District Council, 105 Tainui St, Greymouth
TELEPHONE: (03) 768 0113
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: 
LEGAL LAND DESCRIPTION: Nemona State Forest, Pt R 1605, Blk II, Hohonu S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Old dam
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): ~1.5
CREST LENGTH (m): ~40
METRES ABOVE SEA LEVEL: 160
FOUNDATION TYPE: 
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~1750
RESERVOIR AREA (Ha): ~0.25
RESERVOIR DEPTH (m): ~0.7
CATCHMENT AREA (Ha): Immediate dam area
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: 
INSPECTED BY WHOM: 
NO INSPECTION: (?)

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
NOTES ON UN-NAMED DAM - COCKABULLA CREEK

Very small dam.

Built a number of years ago. recommissioned in recent years.

On terrace adjacent to Cockabulla Road.

Rough condition, densely vegetated.

Very low hazard. Small reservoir. Water would flow over terrace edge.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Mosquito Creek
CATCHMENT REFERENCE: 912050
MAP REFERENCE: NZMS 260 J32 Hokitika 695467
AERIAL PHOTO. REFERENCE:
DISTRICT: Grey

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Timberlands (West Coast) Limited
ADDRESS: Timberlands, Grey District Chambers, 105 Tainui St, Greymouth
TELEPHONE: (03) 768 0113
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: Nemona State Forest, 31 Pt R 1661, Blk VI, Hohonu S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Last Century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2.7
CREST LENGTH (m): 150
METRES ABOVE SEA LEVEL: 200
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Controlled and Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): See notes
RESERVOIR AREA (Ha): ~0.5
RESERVOIR DEPTH (m): See notes (empty at present)
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 0.45 m x 0.4 m (control gate), Uncontrolled
channel ~1.5 m x 0.5 m

(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - MOSQUITO CREEK

Reservoir empty at present - valve/control gate left open.

On hillside in Mosquito Creek catchment.

Densely overgrown with native trees.

Hill been logged around upstream end of dam.

Downstream thick native bush.

Crest forms a broad curve.

Spillway channel on true right end of crest - overgrown.

Control gate in mid crest region.

Very low hazard and very isolated.
Westland District
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Government Dam
RIVER: Un-named Creek (Greenstone River catchment)
CATCHMENT REFERENCE: 911100
MAP REFERENCE: NZMS 260 J32 Hokitika 646402
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Quinns Terrace Mining Limited
ADDRESS: Lanky Guenole, Kumara Junction
TELEPHONE: (03) 7626 764
DAM PURPOSE: Gold mine water supply
LEGAL LAND DESCRIPTION: Nenona State Forest, Rural Sec 5536, Blk XII, Waimea S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Late last century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 4
CREST LENGTH (m): 78
METRES ABOVE SEA LEVEL: -120
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Controlled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 10000 - 30000
RESERVOIR AREA (Ha): 10
RESERVOIR DEPTH (m): 1.3
CATCHMENT AREA (Ha): 30
SPILLWAY DISCHARGE CAPACITY: 0.5m diameter pipe and control gate
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR: N
INSPECTED BY WHOM:
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON GOVERNMENT DAM - GREENSTONE RIVER

Old, large structure built on high terrace/hill top between Taramakau and Greenstone Rivers (up Three Mile Road).

Access is up walking track which follows the water race around the hillside. Water race been diverted from original.

Densely vegetated with native scrub/gorse.

Outlet is a 0.5m diameter pipe encased in concrete; flow is controlled by valve. Water from pipe flows into dug out water race.

Very low hazard assessment. Damage would be confined to scouring of hillside and loss of vegetation. Three Mile Road (gravel road at base of hill) may get damaged - road is mainly used by miners.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Greenstone River tributary
CATCHMENT REFERENCE: 
MAP REFERENCE: NZMS 260 J32 Hokitika 657392
AERIAL PHOTO. REFERENCE: 
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Quinns Terrace Mining Limited
ADDRESS: Lanky Guenole, Kumara Junction
TELEPHONE: (03) 7626 764
DAM PURPOSE: Gold mine water supply
LEGAL LAND DESCRIPTION: Pt Res 1562 Blk Hohonu S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Late 1980's
DESIGNED BY: 
BUILT BY: 
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3.5
CREST LENGTH (m): 77
METRES ABOVE SEA LEVEL: -80
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Controlled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): very small
RESERVOIR AREA (Ha): ~0.5
RESERVOIR DEPTH (m): 
CATCHMENT AREA (Ha): 
SPILLWAY DISCHARGE CAPACITY: ~1.5m x 1m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: 
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
NOTES ON SMALL UN-NAMED DAM - GREENSTONE CATCHMENT

Access via track off Three Mile Road.

Very small dam on valley floor.

Not being used.

Almost like two small dams linked together.

Roughly built.

Very low hazard. Isolated and small reservoir.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Cemetery Dam
RIVER: Serpentine Creek
CATCHMENT REFERENCE: 910110
MAP REFERENCE: NZMS 260 J32 Hokitika 603385
AERIAL PHOTO. REFERENCE: 
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Cook Road Makers Limited
ADDRESS: Doug Cook (Manager), Kaihinu R.D. 2, Hokitika
TELEPHONE: (03) 755 8127
DAM PURPOSE: Gold mine water supply
MINING LICENCE: 
LEGAL LAND DESCRIPTION: R 2039, Blk XII, Waimea S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: About 1930
DESIGNED BY: 
BUILT BY: George Honey
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 4.8
CREST LENGTH (m): 200
METRES ABOVE SEA LEVEL: -125
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled (see notes)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -40000
RESERVOIR AREA (Ha): -4
RESERVOIR DEPTH (m): 1 (estimated average)
CATCHMENT AREA (Ha): 50
SPILLWAY DISCHARGE CAPACITY: See notes
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: Y
INSPECTED BY WHOM: 
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: Y
VERY LOW:
NOTES ON CEMETERY DAM - KUMARA

Built by George Honey, and old Kumara goldminer.


Water supplied to dam by natural runoff (and water race?).

Recent repair works carried out by Doug Cook near spillway.

Densely vegetated.

It appears as thought several spillway channels may exit from true right side - needs surveying to be precise.

Recent concern has arisen about Timberlands v-blading the catchment behind the dam. Cook thinks this may increase runoff into the reservoir and put increased pressure on the dam.


If failed at true right abutment water would probably flow over terrace edge into old gold working area. If it failed at left side may damage Greenstone Road then enter Serpentine Creek tributary.

Given a low hazard rating due to location on terrace.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Okuku Water race
CATCHMENT REFERENCE:
MAP REFERENCE: NZMS 260 J32 Hokitika 624374
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Cook Road Makers Limited
ADDRESS: Doug Cook (Manager), Kahihi R.D. 2, Hokitika
TELEPHONE: (03) 755 8127
DAM PURPOSE: Gold mine water supply
MINING LICENCE:
LEGAL LAND DESCRIPTION: C.L. L6 141 Blk XII, Waimea S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE:
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -3.0
CREST LENGTH (m): -95
METRES ABOVE SEA LEVEL: -140
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Controlled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³):
RESERVOIR AREA (Ha): very small
RESERVOIR DEPTH (m): near empty (valve gates fully open at time of writing)
CATCHMENT AREA (Ha): Okuku water race
SPILLWAY DISCHARGE CAPACITY:
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR: Y
INSPECTED BY WHOM: Mine staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON UN-NAMED DAM - OKUKU WATER RACE

Very small dam near end of water race at Stafford Loop Road S.H. 6 junction.

Overgrown with gorse.

Near empty at time of writing - control gate open.

Reservoir is hour glass shape - crest curved.

Low hazard. Could cause some damage to Stafford Loop Road if failed.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Kapitea Creek catchment
CATCHMENT REFERENCE: 910100
MAP REFERENCE: NZMS 260 J32 Hokitika 617373
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Graham Piner
ADDRESS: 20 Stanton Crescent, Greymouth
TELEPHONE: (03) 768 5397
DAM PURPOSE: Gold mine water supply
LEGAL LAND DESCRIPTION:

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1980's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -2.5
CREST LENGTH (m): 170
METRES ABOVE SEA LEVEL: -70
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): very small quantity
RESERVOIR AREA (Ha): very small
RESERVOIR DEPTH (m): 0.7
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON 2 UN-NAMED DAMS - KAPITEA CREEK

Roughly constructed, gravel ridge, overgrown with gorse.
Very small dam, holding very little water.
Surrounded by extensive mined area.
In a series of interconnected dams - others are breached or totally dry.
Supposed to be demolished during restoration.
Curved crests.
*Very* low hazard - due to little water and location.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Kapitea Creek
CATCHMENT REFERENCE: 910100
MAP REFERENCE: NZMS 260 J32 Hokitika 617373
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Graham Piner
ADDRESS: 20 Stanton Crescent, Greymouth
TELEPHONE: (03) 768 5397
DAM PURPOSE: Gold mine water supply
LEGAL LAND DESCRIPTION:

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1980's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.5
CREST LENGTH (m): 133
METRES ABOVE SEA LEVEL: -70
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPIEWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): very small
RESERVOIR AREA (Ha): very small
RESERVOIR DEPTH (m): 0.5
CATCHMENT AREA (Ha):
SPIEWAY DISCHARGE CAPACITY:
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff
CATCHMENT REFERENCE: 910100
MAP REFERENCE: NZMS 260 J32 Hokitika 616372
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Cook Roadmakers Limited
ADDRESS: Doug Cook (Manager), Kairimu, R.D. 2, Hokitika
TELEPHONE: (03) 755 8127
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 860016(?) Dead. Expires 20/9/88
MINING LICENCE:
LEGAL LAND DESCRIPTION: R 2039, Legal Road, B1k XI, Hohenu S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE:
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3.5
CREST LENGTH (m): 86
METRES ABOVE SEA LEVEL: ~70
FOUNDATION TYPE:
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Controlled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): very small (almost empty)
RESERVOIR AREA (Ha): ~0.1
RESERVOIR DEPTH (m): almost empty
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 6m x 1.2m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: (?)
IRREGULAR: Y
INSPECTED BY WHOM:
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - OKUKU WATER RACE

Very small roughly constructed dam - dozed up gravel ridge.

Reservoir circular shaped - crest roughly L shaped.

Built up hillside, adjacent to south side of Larkins Road (Legal road section).

Fed by natural runoff. Okuku water race flows around base of crest.

Holds little volume even when full.

Outlet controlled by 0.1m diameter pipe and valve.

Very low hazard due to location and no assets downstream.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Kapitea Short
RIVER: Kapitea Creek
CATCHMENT REFERENCE: 910100
MAP REFERENCE: NZMS 260 J32 Hokitika 623372
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Electric Power Board
ADDRESS: Bob Milne (Manager), 112 Mackay Street, Greymouth
TELEPHONE: (03) 768 0242 (work), (03) 738 0038 (home)
DAM PURPOSE: Hydro-electric power generation
RESOURCE CONSENT: 75021 - Current. Expires 17/2/1995
MINING LICENCE:
LEGAL LAND DESCRIPTION: Pt R 2040, Pt R 1616, R 766, B1k XVI Waimea S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1978
DESIGNED BY: Royds Sutherland and McLeay
BUILT BY: Highway Construction Limited, Nelson
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 11
CREST LENGTH (m): 150
METRES ABOVE SEA LEVEL: -140
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway (see notes)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: West Coast Electric Power Board

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): See notes
RESERVOIR AREA (Ha): 222
RESERVOIR DEPTH (m): 5 (at deepest point)
CATCHMENT AREA (Ha): See notes
SPILLWAY DISCHARGE CAPACITY: (MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: West Coast Electric Power Board staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT: Y
LOW: (?) See comments
VERY LOW:
NOTES ON KAPITEA SHORT DAM - KAPITEA CREEK

Professionally designed and built.

Largest reservoir in region and part of largest dam structure (Kapitea Reservoir).

From the northern section of the Kapitea Dam - joins into Kapitea Long Dam - see next page.


Built in natural depression.

Spillway structure is along Kapitea long section.

Rock armouring on upstream face and water level recorder.

Penstock to Dillmanstown Powerhouse exits from left side of dam.

Monitored - boreholes/sensors every 50m around base of structure.

Significant hazard. Failure would result in destruction of Stafford Loop Road, Dillmanstown Powerhouse and water race to Kumara Powerhouse (given a low hazard rating by Ministry of Commerce 1988).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Kapitea Long
RIVER: Kapitea Creek
CATCHMENT REFERENCE: 910100
MAP REFERENCE: NZMS 260 J32 Hokitika 621365
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Electric Power Board
ADDRESS: Bob Milne (Manager), 112 Mackay Street, Greymouth
TELEPHONE: (03) 768 0242 (work), (03) 738 0038 (home)
DAM PURPOSE: Hydro-electric power generation
RESOURCE CONSENT: 75021 - Current. Expires 17/2/1995
MINING LICENCE:
LEGAL LAND DESCRIPTION: Pt R 2040, Pt R 1616, R 766, Blk XVI Waimea S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1978
DESIGNED BY: Royds Sutherland and McLeay
BUILT BY: Highway Construction Limited, Nelson
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 16
CREST LENGTH (m): 890
METRES ABOVE SEA LEVEL: -140
FOUNDATION TYPE: Gravel - sandstone
SEALING POSITION AND MATERIAL: Internal core
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: West Coast Electric Power Board

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): See notes
RESERVOIR AREA (Ha): 220
RESERVOIR DEPTH (m): 5 (at deepest point)
CATCHMENT AREA (Ha): See notes
SPILLWAY DISCHARGE CAPACITY: See notes
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: West Coast Electric Power Board staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT: Y
LOW:
VERY LOW:
NOTES ON KAPITEA LONG DAM - KAPITEA CREEK

Major part of the Kapitea Reservoir dam structure.

Stafford Loop road actually goes along crest of the structure for a short distance.

Concrete spillway structure about half way along crest - flows directly into Kapitea Creek.

See previous page for location.


Catchment area difficult to determine - water is brought in from several catchments. Reservoir volume on plans held by West Coast Electric Power Board (been 'misplaced').

Significant hazard. Failure would result in Stafford Loop Road washout and significant damage to Kapitea Creek bed area. Could possibly wash out road and S.H. 6 (about 8km away).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff (Scandinavian Hill, German Gully)
CATCHMENT REFERENCE: 909020
MAP REFERENCE: NZMS 260 J32 Hokitika 578367
AERIAL PHOTO. REFERENCE: 
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: G.J. Robinson Mining
ADDRESS: G. Robinson, Kumara Junction
TELEPHONE: (03) 7369 765
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 92032 - Current. Expires 30/10/1993
MINING LICENCE:
LEGAL LAND DESCRIPTION: Pt R 1678, Blk XV, Waimea S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1990's
DESIGNED BY: 
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.1
CREST LENGTH (m): 60
METRES ABOVE SEA LEVEL: ~160
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~468
RESERVOIR AREA (Ha): 0.078
RESERVOIR DEPTH (m): ~0.6
CATCHMENT AREA (Ha): 0.078
SPILLWAY DISCHARGE CAPACITY: 1m x 0.1m
(MAX. FLOOD CAPACITY): 

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR: 
INSPECTED BY WHOM: Mine staff
NO INSPECTION: 

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
NOTES ON UN-NAMED DAM - SCANDINAVIAN HILL

Very small elliptical ridge (settling pond).

At base of terrace, at end of gold water race. See mine workers for access.
Pump and 14cm diameter pipe takes water back up terrace to mine site.
Spillway channel on true left, across 4 x 4 track.

Very low hazard. No assets at risk. Very small water volume.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Old water race (Scandinavian Hill, German Gully)
CATCHMENT REFERENCE: 909020
MAP REFERENCE: NZMS 260 J32 Hokitika 578367
AERIAL PHOTO. REFERENCE: 
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: G.J. Robinson Mining
ADDRESS: G. Robinson, Kumara Junction
TELEPHONE: (03) 7369 765
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 92032 - Current. Expires 30/10/1993
MINING LICENCE: ML 32 432 - Current. Expires 30/10/1993
LEGAL LAND DESCRIPTION: Pt R 1678, Blk XV, Waimea S.D.

ACCESS: Private

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1990's
DESIGNED BY:
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 4
CREST LENGTH (m): 5
METRES ABOVE SEA LEVEL: ~180
FOUNDATION TYPE: Papa (Mudstone)
SEALING POSITION AND MATERIAL: Internal clay core
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE:
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~100m³
RESERVOIR AREA (Ha): very small (~100m²)
RESERVOIR DEPTH (m): ~1
CATCHMENT AREA (Ha): very small
SPILLWAY DISCHARGE CAPACITY: 2.7m x 0.6m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mine staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - OLD WATER RACE - SCANDINAVIAN HILL

Very small dam, blocking an old water race coming down from terrace level currently being worked (dam recently built).

Water right actually covers this dam - Robinson's other small "dams" are called ponds or water right.

Pump takes water back up to working area.

Spillway on true right flows down to settling pond (previous page).

In very steep sided channel in papa foundation.

Very low hazard; Due to isolation and extremely small reservoir. May affect settling pond downstream if failed.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff (Scandinavian Hill, German Gully)
CATCHMENT REFERENCE: 909020
MAP REFERENCE: NZMS 260 J32 Hokitika 578366
AERIAL PHOTO. REFERENCE: 
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: G.J. Robinson Mining
ADDRESS: G. Robinson, Kumara Junction
TELEPHONE: (03) 7369 765
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 92032 - Current. Expires 30/10/1993
MINING LICENCE: ML 32 432 - Current. Expires 30/10/1993
LEGAL LAND DESCRIPTION: Pt R 1678, B1k XV, Waimea S.D.

ACCESS: Private

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1990’s
DESIGNED BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -1
CREST LENGTH (m): 65.5
METRES ABOVE SEA LEVEL: -190
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -520-780
RESERVOIR AREA (Ha): 0.052
RESERVOIR DEPTH (m): -1 - 1.5
CATCHMENT AREA (Ha): 0.052
SPILLWAY DISCHARGE CAPACITY: 5m x 0.5m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR: 
INSPECTED BY WHOM: 
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
NOTES ON UN-NAMED DAM - SCANDINAVIAN HILL

Another settling pond on Robinson's claim.

Road formation forms a very small dam.

Fed from natural run-off at present. Water race from dam up road (Ferguson's next page) has been blocked off.

Spillway in true right corner - flows over road.

Very low risk. Small reservoir, location, no assets at risk.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff (Scandinavian Hill, Waimea Creek catchment)
CATCHMENT REFERENCE: 909000
MAP REFERENCE: NZMS 260 J32 Hokitika 579365
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: R. Ferguson (See comments)
ADDRESS: 25 Lydia Street, Greymouth
TELEPHONE:
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: ML 32 406. Expired
LEGAL LAND DESCRIPTION: Pt R 1678, Blk XV, Waimea S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1990's
DESIGNED BY:
BUILT BY: R. Ferguson
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): ~2
CREST LENGTH (m): 110
METRES ABOVE SEA LEVEL: ~220
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): very small
RESERVOIR AREA (Ha): very small
RESERVOIR DEPTH (m): very small
CATCHMENT AREA (Ha): Immediate dam area - very small
SPILLWAY DISCHARGE CAPACITY: 5m x 0.7m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR: Y
INSPECTED BY WHOM: Robinson Bros Mine staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON UN-NAMED DAM (1) - SCANDINAVIAN HILL

Roughly constructed on top ridge of Scandinavian Hill, opposite Robinson's claim. Dozed up gravel ridge.

Filled with rainwater.

On Department of Conservation land.

Not being used at present - hasn't for some months.

Crest 3/4 circle shape.

Very small reservoir.

Spillway channel flows into Dam 2 (next page).

Low hazard: Could scour Scandinavian Hill road if burst. (on Terrace edge directly above road).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff (Scandinavian Hill, Waimea Creek catchment)
CATCHMENT REFERENCE: 909000
MAP REFERENCE: NZMS 260 J32 Hokitika 579365
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: R. Ferguson (See comments)
ADDRESS: 25 Lydia Street, Greymouth
TELEPHONE:
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: ML 32 406. Expired
LEGAL LAND DESCRIPTION: Pt R 1678, Blk XV, Waimea S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1980's
DESIGNED BY:
BUILT BY: R. Ferguson
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -1.5
CREST LENGTH (m): 95
METRES ABOVE SEA LEVEL: ~220
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): very small
RESERVOIR AREA (Ha): very small
RESERVOIR DEPTH (m): 0.5 - 1+
CATCHMENT AREA (Ha): Immediate dam area - very small
SPILLWAY DISCHARGE CAPACITY: 1.5m x 1.2m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR: Y
INSPECTED BY WHOM: Robinson Bros Mine staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM (2) - SCANDINAVIAN HILL

Linked to Dam 1 (previous page), via spillway channel.

Very poorly constructed - dozed up gravel ridge.

Very small reservoir.

Original spillway channel from southern end of crest blocked off and crest purposely breached - overflow enters original spillway channel/water race at roadside.

Water from spillway goes into water race adjacent to road, then down to Robinson's settling ponds.

Low hazard: As with Dam 1, would probably cause some scouring of Scandinavian Hill road (on terrace directly above road).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Loopline Dam
RIVER: Kapitea Creek
CATCHMENT REFERENCE: 909100
MAP REFERENCE: NZMS 260 J32 Hokitika 616332
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Electric Power Board
ADDRESS: Bob Milne (Manager), 112 Mackay Street, Greymouth
TELEPHONE: (03) 768 0242 (work), (03) 768 0038 (home)
DAM PURPOSE: Hydro-electric power generation
RESOURCE CONSENT: 74020 - Current. Expires 17/2/1995
MINING LICENCE:
LEGAL LAND DESCRIPTION: R 261, R766, Blk XVI, Waimea S.D., Blk IV Kaniere S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: -1878 (original dam), extended in late 1970's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 6
CREST LENGTH (m): 200
METRES ABOVE SEA LEVEL: -145
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: West Coast Electric Power Board

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): See notes
RESERVOIR AREA (Ha): 100
RESERVOIR DEPTH (m): 5 (at deepest point)
CATCHMENT AREA (Ha): See notes
SPILLWAY DISCHARGE CAPACITY: 17m x 1m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: West Coast Electric Power Board staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON LOOPLINE DAM - KUMARA RESERVOIR


Built in lowlying bush clad basin.


One of largest dams/reservoirs in region.

Power Board have misplaced plans for this and Kapitea long/short dams during restructuring, therefore details on volume etc not readily available. Water brought in from several catchments.

Low hazard: If failed, water would flow into Kapitea Reservoir.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff (German Gully catchment)
CATCHMENT REFERENCE: 909020
MAP REFERENCE: NZMS 260 J32 Hokitika 531375
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Simon Cook
ADDRESS: Awatuna, R.D. 2, Kumara
TELEPHONE: (03) 755 6197
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 91014 - Current. Expires 10/1/2003(?)
LEGAL LAND DESCRIPTION: RS 5739, Pt Bed German Creek, Blk X, Waimea S.D.

ACCESS: Private

STRUCTURAL DETAILS

CONSTRUCTION DATE: Early 1980's - early 1990's
DESIGNED BY:
BUILT BY: Simon Cook
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -5.6
CREST LENGTH (m): -180
METRES ABOVE SEA LEVEL: -20
FOUNDATION TYPE: Mudstone and Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent (?)
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): small
RESERVOIR AREA (Ha): small
RESERVOIR DEPTH (m): -1
CATCHMENT AREA (Ha): Immediate slopes surrounding dam - small area
SPILLWAY DISCHARGE CAPACITY: 3m x 1.6m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - GERMAN GULLY

Built in a small valley, immediately adjacent to German Creek.

Multiple curved crest.

Spillway on true left side - cut into mudstone bedrock.

Dam is roughly constructed - covered in gorse.

Reservoir filled with gorse etc.

Access via Forestry Road or call S. Cook.

35cm diameter pipe goes through dam structure - was supposed to be for pumping water from mine site to pond for settlement (?).

About 50m of the true right side of the dam looks to have been recently constructed - maybe extension or repair?

Very low hazard: Small reservoir and location. If burst water would go immediately into German Creek.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Little Hou Hou Creek
CATCHMENT REFERENCE: 907010
MAP REFERENCE: NZMS 260 J32 Hokitika 504306
AERIAL PHOTO. REFERENCE: 
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Spencer Routhan
ADDRESS: 105 Weld Street, Hokitika
TELEPHONE: (03) 755 7615
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 86001 - Current. Expires 9/7/1996
MINING LICENCE: ML 32 2287 - Current. Expires 9/7/1996
LEGAL LAND DESCRIPTION: Crown Lease, R Sec 3393, B1k II, Kaniere S.D.

ACCESS: Private

STRUCTURAL DETAILS

CONSTRUCTION DATE: Late 1980's
DESIGNED BY: 
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.7
CREST LENGTH (m): 44
METRES ABOVE SEA LEVEL: -50
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD: 

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -500 (based on 1m average depth)
RESERVOIR AREA (Ha): 0.05
RESERVOIR DEPTH (m): 2 (at dam - shallows quickly upstream)
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 3m x 0.7m
(MAX. FLOOD CAPACITY): 

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: 
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: 
VERY LOW: Y
NOTES ON UN-NAMED DAM - LITTLE HOU HOU CREEK

Very small, roughly constructed dam.

Fills up from runoff down track.

Very small reservoir. In middle of extensive, unrestored mined area.

Locked gate (not sure who to get key off).

Very low hazard - very small, isolated, no assets nearby.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff
CATCHMENT REFERENCE: 907000 (Hou Hou Creek catchment)
MAP REFERENCE: NZMS 260 J32 Hokitika 493302
AERIAL PHOTO. REFERENCE: 906/81 Sheet 1. Flown 1981 (Aerial Mapping)
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Rimu Gold Mining Limited
ADDRESS: Ian Cummings, 13A Leith Crescent, Greymouth
TELEPHONE: (03) 768 5051
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: ML 32 1306 - Current. Expires 8/7/1995
LEGAL LAND DESCRIPTION: Pt Res 162, Pt Rural Sec 722, Crown Land Blk

ACCESS: Private

STRUCTURAL DETAILS

CONSTRUCTION DATE: November 1991
DESIGNED BY: 
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 4.7
CREST LENGTH (m): 53.5
METERS ABOVE SEA LEVEL: -70
FOUNDATION TYPE: Gravel and mudstone
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): very small
RESERVOIR AREA (Ha): -0.107
RESERVOIR DEPTH (m): -1 (at deepest point)
CATCHMENT AREA (Ha): -0.107
SPILLWAY DISCHARGE CAPACITY: 1.5m x 0.5m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mine staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - HOU HOU CREEK CATCHMENT

Located up terrace face, near junction of Foley Creek and Hou Hou Creek.

Roughly built, dozed up gravel ridge.

Crest is straight, reservoir roughly triangular shaped.

Fills from natural runoff and runoff from worked area.

Very small reservoir.

Spillway on true left.

Dam failed very recently (a couple of weeks before time of writing) - no damage. Assumed to have been repaired.

Very low hazard. Based on small reservoir volume and no damage occurring during recent failure - Only mine ground downstream (been restored).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Natural runoff (Foley Creek catchment)
CATCHMENT REFERENCE: 907000
MAP REFERENCE: NZMS 260 J33 Kaniere 502297
AERIAL PHOTO. REFERENCE: 906/81 Sheet 1. Flown 1981 (Aerial Mapping)
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Grant Growcott (See notes)
ADDRESS: Blue Spur
TELEPHONE: (03) 755 6199
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
LEGAL LAND DESCRIPTION: SO 11564, Pt Rs 1662, Blk II, Kaniere S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1991
DESIGNED BY:
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 3
CREST LENGTH (m): 45
METRES ABOVE SEA LEVEL: ~60
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~1350
RESERVOIR AREA (Ha): 0.0675
RESERVOIR DEPTH (m): ~2
CATCHMENT AREA (Ha): 0.0675
SPILLWAY DISCHARGE CAPACITY: 3m x 1m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mine staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - FOLEY CREEK

Very small, roughly constructed dam.

In middle of mined area, on bush clad valley floor.

Spillway channel on true left side.

Although Growcott uses water, dam is on either Ian Cummings licence (32 1306) or Mineral Resources Ltd licence (32 2543). Not sure where boundary is.

Access via Foley Creek Road.

Very low risk: very small, isolated - no assets at risk.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Fishermans Creek
CATCHMENT REFERENCE: 905041
MAP REFERENCE: Topomap 260 J33 Kaniere 423284
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Phelps Mining Limited
ADDRESS: Fred Phelps, Southside, Hokitika
TELEPHONE: (03) 755 7579
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE: ML 32 3237 - Current. Expires 2/2/2012
LEGAL LAND DESCRIPTION: Rural Sec 1605, Rural Sec 4046, Blk IV Mahinapua S.D.
ACCESS: Private

STRUCTURAL DETAILS

CONSTRUCTION DATE: Late 1980's - early 1990's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 4.4
CREST LENGTH (m): 285
METRES ABOVE SEA LEVEL: ~15
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway
PERMANENT/TEMPORARY STRUCTURE: Permanent (?)
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³):
RESERVOIR AREA (Ha):
RESERVOIR DEPTH (m): ~1 - 1.5 (gets about 1m deeper)
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY:
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: Y
IRREGULAR:
INSPECTED BY WHOM: Mine staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON UN-NAMED DAM - FISHERMANS CREEK

Long, multiple curved crest (broad double S shaped).

On true right bank of Fishermans Creek, immediately adjacent to S.H. 6.

No spillway, water is recycled to workings up terrace - pumped up via a 16cm pipe.

See Fred Phelps for access.

Low hazard: If failed could cause some damage to S.H. 6, especially at Fishermans Creek culvert (corrugated iron/concrete culvert -2.5m x 4m, and about 85m from northern end of dam).
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Pine Creek
CATCHMENT REFERENCE: 905041
MAP REFERENCE: Topomap 260 J33 Kaniere 432272
AERIAL PHOTO. REFERENCE: 
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Herbie Winter
ADDRESS: 96 Jollie Street, Hokitika
TELEPHONE: (03) 755 6765
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 84086 - Expired 30/5/1988
LEGAL LAND DESCRIPTION: 50 2301, Rural Sec 3552, Blk IV & VII, Mahinapua S.D.

ACCESS: Private (locked gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1989
DESIGNED BY: Mine staff
BUILT BY: Mine staff
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2
CREST LENGTH (m): 57
METRES ABOVE SEA LEVEL: -35
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary (?)
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 1605
RESERVOIR AREA (Ha): 0.214
RESERVOIR DEPTH (m): 0.75
CATCHMENT AREA (Ha): 0.214
SPILLWAY DISCHARGE CAPACITY: 1m x 0.75m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - PINE CREEK

See notes on previous page for access.

Built across Pine Creek.

Old dam has been breached and repaired.

Overgrown with native trees.

Spillway on true left - outlet pipes on true right: Crest curves around the pipe/valve.

Very low hazard: Pine Creek steep sided, then flows into Fishermans Creek about 2km away. No assets downstream.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named
RIVER: Pine Creek
CATCHMENT REFERENCE: 905041
MAP REFERENCE: Topomap 260 J33 Kaniere 435271
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Herbie Winter
ADDRESS: 96 Jollie Street, Hokitika
TELEPHONE: (03) 755 6765
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: 84086 - Expired 30/5/1988
LEGAL LAND DESCRIPTION: SD 2301, Rural Sec 3552, Blk IV & VII, Mahinapua S.D.
ACCESS: Private (locked gate)

STRUCTURAL DETAILS

CONSTRUCTION DATE: About the turn of this century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2.5
CREST LENGTH (m): 67
METRES ABOVE SEA LEVEL: -40
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled and Controlled (see comments)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -8000
RESERVOIR AREA (Ha): 0.4
RESERVOIR DEPTH (m): -2
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY: 4m x 1.5m (uncontrolled)
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM - PINE CREEK

Very rough construction, overgrown with gorse.

Crest runs // to Pine Creek - built on bank adjacent to Creek channel.

Spillway on true left (western end).

Access - locked gate - call H. Winter (track is off Adairs road).

Very low hazard. Small reservoir. Water would go straight into deep cut channel of Pine Creek.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Kawhaka water race, storage pond (1)
RIVER: Kawhaka water race
CATCHMENT REFERENCE: Kawhaka Creek 635285
MAP REFERENCE: NZMS 260 J33 Kaniere
AERIAL PHOTO REFERENCE: 
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Electric Power Board
ADDRESS: Bob Milne (Manager), 112 Mackay Street, Greymouth
TELEPHONE: (03) 768 0242 (work), (03) 768 0038 (home)
DAM PURPOSE: Hydro-electric power generation
RESOURCE CONSENT: 74020 - Current. Expires 17/2/1995
MINING LICENCE:
LEGAL LAND DESCRIPTION: C.L. Pt Kawhaka State Forest Blk IV, Kaniere S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1978(?)
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): ~6.7
CREST LENGTH (m): ~500
METRES ABOVE SEA LEVEL: ~180
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway (see notes)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: West Coast Electric Power Board

HYDROLOGICAL DATA

RESERVOIR VOLUME (m$^3$): See notes
RESERVOIR AREA (Ha): ~10
RESERVOIR DEPTH (m): See notes
CATCHMENT AREA (Ha): Kawhaka water race
SPILLWAY DISCHARGE CAPACITY:
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR: 
IRREGULAR: Y
INSPECTED BY WHOM: West Coast Electric Power Board staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH: 
SIGNIFICANT: 
LOW: Y
VERY LOW:
NOTES ON KAWHAKA WATER RACE STORAGE POND (1)

Professionally designed and built.

On Dillmanstown power scheme.

Crest L shaped.

Next to Old Christchurch Road and access road to Kawhaka Creek weir.

Water flows in and out of pond via the water race.

Storage volume on West Coast Electric Power Board plans (been misplaced during Powerboard restructuring).

Low hazard. Would wash out access road up Kawhaka Creek to weir. Downstream of road is bush clad, un-named tributary of Kawhaka Creek.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named (2)
RIVER: Kawhaka Creek water race storage pond
CATCHMENT REFERENCE: 908020
MAP REFERENCE: NZMS 260 J32 Hokitika 645266
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: West Coast Electric Power Board
ADDRESS: Bob Milne (Manager), 112 Mackay Street, Greymouth
TELEPHONE: (03) 768 0242 (work), (03) 768 0038 (home)
DAM PURPOSE: Hydro-electric power generation
RESOURCE CONSENT: 74020 - Current. Expires 17/2/1995
MINING LICENCE:
LEGAL LAND DESCRIPTION: C.L. Pt Kawhaka State Forest, Pt Sec 1618, B1k VII
Kaniere S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1978(?)
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -6.7
CREST LENGTH (m): 400
METRES ABOVE SEA LEVEL: -190
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: No spillway (see notes)
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD: West Coast Electric Power Board

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -50 000+
RESERVOIR AREA (Ha): 5
RESERVOIR DEPTH (m): -2+
CATCHMENT AREA (Ha):
SPILLWAY DISCHARGE CAPACITY:
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR: Y
INSPECTED BY WHOM: West Coast Electric Power Board staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON KAHHAKA WATER RACE SCORAGE POND (2)

Access via Old Christchurch Road (between Arahura and Kawhaka).
Professionally designed and built.
Dam structure forms access to Kawhaka Creek weir.
Crest is part of bank of Kawhaka water race.
No spillway - water race from weir upstream, and water race outlet.
Very low hazard.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named (1)
RIVER: Natural runoff (Seddon Terrace, Hokitika River catchment)
CATCHMENT REFERENCE: 906000
MAP REFERENCE: Topomap 260 J33 Kaniere 460244
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Landcorp (?)
ADDRESS:
TELEPHONE:
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: C.L. Pt R 1462 Blk V, Kaniere S.D.
ACCESS: Private (call Tony Newton, Leaseholder - Rimu)

STRUCTURAL DETAILS

CONSTRUCTION DATE: Last Century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 1.5
CREST LENGTH (m): 62
METRES ABOVE SEA LEVEL: ~70
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): 8000 - 12000
RESERVOIR AREA (Ha): ~0.8
RESERVOIR DEPTH (m): ~1 - 1.5
CATCHMENT AREA (Ha): ~100
SPILLWAY DISCHARGE CAPACITY: 2m x 1m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM:
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON UN-NAMED DAM - SEDDON TERRACE (1)

Old earth dam, densely overgrown with gorse.

Near Seddon Terrace Road (access is easy).

Hasn’t been used for many years.

Filled from natural runoff of swampy land on Seddon Terrace.

Crest is straight - ties in natural high land each side.

Batters of structure densely overgrown with gorse and broom.

Spillway in central crest region.

Has held a lot more water in past. Spillway channel level through crest was cut down considerably and re-inforced with heavy rock about the time the Rimu dredge closed down.

According to leaseholder water level doesn’t rise about present level.

Low hazard: If failure occurred there is a possibility water could flow down over Rimu/Woodstock road and through some Rimu properties.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named (2)
RIVER: Natural runoff (Seddon Terrace, Hokitika River catchment)
CATCHMENT REFERENCE: 906000
MAP REFERENCE: Topomap 260 J33 Kaniere 459243
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Landcorp (?)
ADDRESS:
TELEPHONE: Gold mine water supply
RESOURCE CONSENT: Unlisted
MINING LICENCE:
LEGAL LAND DESCRIPTION: C.L. Pt R 1462 Blk V, Kaniere S.D.
ACCESS: Private (call Tony Newton, Rimu - Leaseholder)

STRUCTURAL DETAILS

CONSTRUCTION DATE: Last Century
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -2
CREST LENGTH (m): -175
METRES ABOVE SEA LEVEL: -170
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -16000
RESERVOIR AREA (Ha): -1.6
RESERVOIR DEPTH (m): -1m average
CATCHMENT AREA (Ha): -100
SPILLWAY DISCHARGE CAPACITY: 1m x 1m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW: Y
VERY LOW:
NOTES ON UN-NAMED DAM - SEDDON TERRACE (2)

Immediately upstream of Dam (1) (previous page).

Structure is densely covered in gorse etc, therefore difficult to get precise measurements.

Crest is L shaped.

Spillway on true right.

Located in middle of swamp.

Dam (2) and (and 1) haven't been used for many years.

Vegetation patterns indicate reservoir was once much larger than at present (fills up considerably more than present according to leaseholder).

Low risk. If failed would probably affect Dam (1) downstream water could affect Woodstock - Rimu Road and some Rimu properties.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Un-named (1)
RIVER: Natural Run-off (Hokitika River catchment)
CATCHMENT REFERENCE: 906000
MAP REFERENCE: NZMS 260 J33 Kaniere 467236
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Alf Moreton
ADDRESS: 8 Michael Ave, Christchurch 8
TELEPHONE: (03) 384 9294
DAM PURPOSE: Gold mine water supply
LEGAL LAND DESCRIPTION: C.L., Rural Sec 5235, Blk V, Kaniere S.D.

ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE:
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 2.5
CREST LENGTH (m): 24
METRES ABOVE SEA LEVEL: -40
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): very small
RESERVOIR AREA (Ha): very small
RESERVOIR DEPTH (m): -.7
CATCHMENT AREA (Ha): Immediate dam area
SPILLWAY DISCHARGE CAPACITY: 1.8m x 0.5
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: 
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
Very small earth dam.

Densely overgrown with gorse.

Built on terrace face.

Curved crest. Spillway leaves true left side - flows down terrace.

Water depth -0.7m - almost flowing down spillway at this level.

Very low hazard. Small volume of water and thick vegetation downstream. Unlikely Back Creek Road would be affected (on flat near base of hill).
NAME: Un-named (2)
RIVER: Natural Run-off (Hokitika River catchment)
CATCHMENT REFERENCE: 906000
MAP REFERENCE: NZMS 260 J33 Kaniere 466235
AERIAL PHOTO. REFERENCE:
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Alf Moreton
ADDRESS: 8 Michael Ave, Christchurch 8
TELEPHONE: (03) 384 9294
DAM PURPOSE: Gold mine water supply
LEGAL LAND DESCRIPTION: C.L., Rural Sec 5235, Blk V, Kaniere S.D.
ACCESS: Public

STRUCTURAL DETAILS

CONSTRUCTION DATE:
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): -2
CREST LENGTH (m): 86
METRES ABOVE SEA LEVEL: -50
FOUNDATION TYPE: Gravel
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Temporary
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): -5000 - 6250
RESERVOIR AREA (Ha): -0.25
RESERVOIR DEPTH (m): -2 - 2.5
CATCHMENT AREA (Ha): Immediate dam surrounds
SPILLWAY DISCHARGE CAPACITY: 6m x 1.2m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR:
INSPECTED BY WHOM: Y
NO INSPECTION: Y

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON UN-NAMED DAM (2) - BACK CREEK ROAD - WOODSTOCK (ALF MORETON)

Built midway up terrace face.

Crest semi-circular shape.

Roughly constructed.

Large pump/shed next to dam.

Spillway exits central crest area (older spillway exits left side near pump shed). Spillway channels go down terrace face past the staff room shed.

Very low hazard: Location and thick vegetated, mined area down terrace face, below the dam.
THE WEST COAST REGIONAL COUNCIL DAM INVENTORY

DAM NAME AND LOCATION

NAME: Ross United Dam
RIVER: Jone's Creek
CATCHMENT REFERENCE: 904010
MAP REFERENCE: Topomap 260 J33 Kaniere 312088
AERIAL PHOTO. REFERENCE: 904/27 Sheet 1 - 1992
DISTRICT: Westland

OWNER AND LEGAL DETAILS

MOST RECENT OWNER/OPERATOR: Department of Conservation
ADDRESS: Department of Conservation, Sewell Street, Hokitika
TELEPHONE: (03) 755 8301
DAM PURPOSE: Gold mine water supply
RESOURCE CONSENT: Unlisted - historical
MINING LICENCE:
LEGAL LAND DESCRIPTION: Pt Res 1668, BlkII, Totara S.D.

ACCESS: Public walkway

STRUCTURAL DETAILS

CONSTRUCTION DATE: 1860's - 1870's
DESIGNED BY:
BUILT BY:
CONSTRUCTION TYPE: Earth
CREST HEIGHT (m): 6+
CREST LENGTH (m): ~30
METRES ABOVE SEA LEVEL: -80
FOUNDATION TYPE:
SEALING POSITION AND MATERIAL: Homogeneous earth
SPILLWAY TYPE: Uncontrolled
PERMANENT/TEMPORARY STRUCTURE: Permanent
DRAWINGS AVAILABLE/WHERE HELD:

HYDROLOGICAL DATA

RESERVOIR VOLUME (m³): ~2000 +
RESERVOIR AREA (Ha): 0.1
RESERVOIR DEPTH (m): 2 +
CATCHMENT AREA (Ha): ~90
SPILLWAY DISCHARGE CAPACITY: 0.6m x 0.4m
(MAX. FLOOD CAPACITY):

REGULARITY OF INSPECTION

REGULAR:
IRREGULAR: Y
INSPECTED BY WHOM: Department of Conservation staff
NO INSPECTION:

POTENTIAL HAZARD ASSESSMENT

HIGH:
SIGNIFICANT:
LOW:
VERY LOW: Y
NOTES ON ROSS UNITED DAM - JONE'S CREEK

On Department of Conservation Ross Goldfields walkway - crest is part of track.

In small, steep valley.

Densely vegetated with regenerated native bush.

Spillway on true right - wooden 'culvert' structure (been recently built).

Very low hazard. Only bush and track downstream.
Appendix 1
APPENDIX 1 CONTINUED

BULLER DAM SITES TO INVESTIGATE

CoalCorp
Stockton: 30° (see following diagram)
Resource Consent 89038 Current - Expires 31.3.2027
(coal mine - some up to 10 m³ high).

Thomas Brown Ltd
Hut Creek: Resource Consent 84023. Current - Expires
27.8.1994 (coal mine).

Mulkin Mining Ltd
Garveys Creek: Resource Consent 84041. Current -

Birchfields
Giles Creek: Resource Consent? (coal mine).

Val Curry
Mitchells Gully: 5° Resource Consent 80012. Expired
30.11.1988 (gold mine, very old dams - 1860’s to 1870’s)

D.O.C.
Big River Dam Site: D.O.C. walkway, Reefton. Unlisted
(Historical, gold mine site, may be empty).

WESTLAND DAM SITES TO INVESTIGATE

Tuckers Flat Mining
Kaniere Gold: Crawfish Creek: 81056. Dead - Expires

Blue Spur Mining
Hou Hou Creek tributaries: Resource Consents 83052

Rimu Gold Mining
Natural runoff: Unlisted. Supposed to be registered
and certified by an engineer. No progress.

Timberlands(?)
Gaylor Dam, Sandstone Creek, Rimu (Mahinapua Forest).
May have breached or been drained. Unlisted
(historical).

West Coast Electric
Lake Wahapo outlet: Resource consent. Current
Power Board
Expires 6.3.2009 (hydro electric power).

West Coast Electric
Skiffingtons Swamp, Fox Glacier Power Station:
Power Board
Unlisted. Built in 1960’s. ~3m high. Notes from
Power Board state the dam as "jellylike" when built
and concerns were expressed about its stability.