

14 April 2020 (FINAL)

REVIEW OF THE DECISION TO REMOVE A ROCK OVERHANG ON THE TRUMAN TRACK

Reference: DOC 6188284



Completed work after a rock overhang adjacent to the Truman Track was removed.

Purpose

The purpose of this review is to:

- Understand if Visitor Risk Management (VRM) processes were used to assess the risk of further rockfall to visitors;
- Understand the visitor risk drivers for undertaking the work in a sensitive landscape, and whether the work complied with all relevant policies and legislation; and
- Identify and share lessons learnt from both a system and process perspective.

Context

The Truman Track is a thirty-minute short walk in Paparoa National Park. Approximately 37,000 people visit the site annually.¹ The predominant visitor group is Short Stop Traveller (SST). This visitor group seeks “*instant immersion in nature experiences, associated with a high degree of scenic value or historic interest. They expect a low risk experience associated with safe facilities.*”²

In late July 2019, a 3-4 ton³ block of sandstone fell from a rock overhang and landed adjacent to the Truman Track.

The section of track was immediately closed, and geotechnical advice obtained to assess the risk of further rockfall and identify mitigation options. The geotechnical report recommended two options:

- Remove the remaining sandstone overhang, or
- Install a rockfall barrier

Operations staff then sought a further independent assessment⁴ which revealed water seepage through surface gravels and cracks in the underlying sandstone. In their view, this confirmed that the rock overhang was a significant visitor safety risk, and they made the decision to remove the remaining section of the rock overhang. They sought advice from specialist contractors on how to do this safely with minimal impact on the natural environment. The remaining section of the sandstone overhang was removed in mid-August 2019 and landscape restoration was carried out.

Concerns were raised by Federated Mountain Clubs (FMC) letter to the Department and a news article was published titled “*Blast now think later.*”

This report reviews the appropriateness of the decision to remove the rock overhang and identifies learnings to improve the Department’s Visitor Risk Management system and associated decision-making processes.

¹ Estimate by Operations staff based on track counter records – refer to Correspondence and technical reports in reference section

² Department of Conservation Visitor Strategy 1996 page 25

³ Note Ton verse tonne is used in the Geotech reports.

⁴ E-mail A Black Geotech Ltd 9 August 2019 - refer to correspondence and technical reports in reference section



Caption: 3 -4-ton rockfall adjacent to the Truman Track after the July 2019 rockfall event.

Methodology

A review team was brought together comprising of a Senior Visitor Advisor, Improvement Manager and Senior Ranger Recreation/Historic.

The review team considered relevant policies, reports and emails relating to the incident. This information had been collected as a result of an Official Information Act request (see reference section page 17). A timeline of events is included at Appendix One.

The draft report was shared with the Operations Manager⁵ to ensure the accuracy of information recorded and sought comment and clarification. Feedback was incorporated into the report.

The report was peer-reviewed by a Senior Visitor Advisor and a Senior Heritage Advisor. Technical assurance review was undertaken by the Department's Principle

⁵ Note the Senior Ranger/Supervisor Operations Recreation/Historic involved in the work had left the Department at the time of the investigation.

Advisor Heritage, Principle Advisor Visitor Risk, and Products, Standards and Policy Service Designer. Feedback was incorporated in the final report.

The report has been reviewed and endorsed by the Visitor Advice Manager and the Director Heritage and Visitors.

General findings and recommendations are made at the start of the report. These are followed by the series of detailed questions investigated by the review team, their findings and associated identified improvements.

Key Findings

Operations staff had considerable experience in assessing and managing visitor hazards in the District⁶. However, there are ten learnings to be made.

- 1) The initial response was in accord with best practice guidelines for managing rock fall hazards⁷. When Operations staff were advised that a 3 -4 ton block of sandstone had fallen from a rock overhang beside the Truman Track, they immediately closed the site by erecting barriers and advising visitors of the hazard with signage, as well as published a Visitor Notice on the DOC website. Staff then sought and followed geotechnical advice.
- 2) Operations staff felt a high level of accountability for visitor safety. Based on advice from the geotechnical expert,⁸ they decided that permanent signs and visitor information were not adequate to manage the rockfall hazard in the future⁹.
- 3) Staff should have used the VRM Best Practice Guideline and the VRM online tool to record and assess the rockfall hazard.
- 4) Other options to manage the hazard without removing the rock overhang were not adequately explored through the team process.
- 5) Staff did not apply the VRM decision with due consideration of all relevant statutory documents and policies, including the West Coast Te Tai Poutini

⁶ A systematic assessment of the hazards for the Truman Track had occurred and these assessments were recorded in the VRM online tool.

⁷ Best Practice Guideline best practice treatment for rockfall/landslide/lahar hazards.

⁸ Email from WSP OPUS 24 July 2019 and Truman Track Rockfall Assessment WSP Opus August 2019 Page 9 - refer to correspondence and technical reports in reference section

⁹ Note staff visited the Truman Track lower bay area with a Geotech specialist and considered that permanent signage/interpretation was an appropriate way to inform visitors of these potential rockfall hazards in this area. Refer report WSP OPUS dated 11 October 2019

Conservation Management Strategy and the Paparoa National Park Management Plan.

- 6) Operations staff did not seek advice on whether their decision to remove the rock overhang was consistent with all relevant policies and legislation, including the General Policies for National Parks or the Heritage New Zealand Pouhere Taonga Act 2017.
- 7) Operations staff did not consult with Iwi and/or stakeholders prior to undertaking the work.
- 8) Staff are finding visitor risk management complex. Some staff are not aware of all the elements or familiar with how to apply them.
- 9) The Visitor Risk Management system lacks triggers to consider natural, cultural heritage values and statutory and legal responsibilities.
- 10) The VRM system is not yet well enough developed in the area of quantitative visitor risk thresholds and assessment to adequately support visitor management decisions. Note: This work is underway.

Investigation results matrix

Based on the detailed questions asked to shed light on the considerations and actions taken by Operations staff, the following decision-making picture emerged:

| | Area of investigation | Assessment |
|-----|--|-------------------|
| Q1 | VRM processes used for assessment | Needs improvement |
| Q2 | Assessment leading to ASSYST request | Did not occur |
| Q3 | Archaeological advice considered/requested | In part |
| Q4 | Iwi and stakeholder consultation | Did not occur |
| Q5 | Approval process | Needs improvement |
| Q6 | Work executed within OPUS brief | Success |
| Q7 | Compliance with policies and regulations | Did not occur |
| Q8 | Considerations of other legislation | Needs improvement |
| Q9 | VRM principles applied | Needs improvement |
| Q10 | Geophysical/natural landscape assessment | In part |
| Q11 | Possibility of alternative action | Did not occur |

Recommendations

| | Recommendations | Owner | Status | By when |
|----|--|--|---|--|
| 1) | Incorporate into training how visitor risk management fits within the Department's mandate to protect natural, cultural and heritage values. | Steve Taylor Director Heritage and Visitors | Work is underway to re-think the VRM system application at a place. Training will be provided at the completion of this pilot. | Decision by June 2020. Rollout 2020/21 |
| 2) | Provide assurance that staff are applying the VRM Guiding Principles appropriately to demonstrate their level of 'felt' accountability does not exceed the Department's statutory responsibilities. | Steve Taylor Director Heritage and Visitors | Work is underway to re-think the VRM system application at a place including quality assurance. Training will be provided at the completion of this pilot. | Decision by June 2020. Rollout 2020/21 |
| 3) | Provide assurance staff are recording information leading to decisions in the VRM System to improve transparency. | Steve Taylor Director Heritage and Visitors | Work is underway to re-think the VRM system application at a place including recording of information. Training will be provided at the completion of this pilot. | Decision by June 2020. Rollout 2020/21 |
| 4) | Undertake a field inspection of the archaeological sites in the vicinity of the Truman Track to confirm their location, and, if required, rectify archaeological site records in ArchSite and DOC GIS. Consider updating the location data of archaeological sites on | Mark Davies Director Operations, Western South Island | Senior Heritage Advisor has undertaken a paper exercise as a first step. Field trip to be requested. | By June 2020 |

| | | | | |
|----|--|--|---|---|
| | Conservation Lands & Waters as proposed by Heritage New Zealand and the New Zealand Archaeological Association in 2007. | | | |
| 5) | Develop an approach that trains and/or prompts staff to incorporate all statutory responsibilities when making decisions. | Natasha Haywood Director Planning Permissions and Land | Required to be an inherent component of staff work at place. | By December 2020 |
| 6) | Develop suitable risk thresholds, a quantitative risk assessment methodology and guidelines for procuring geotechnical advice and specific hazard management plans. Incorporate these into the VRM System. | Steve Taylor Director Heritage and Visitors | This work is underway with initial results expected March 2020. | Underway June 2020. Rollout 2020/21 |
| 7) | Review the appropriate level of delegation for decisions relating to hazards that trigger ‘intolerable – seek advice.’ | Steve Taylor Director Heritage and Visitors | Appropriate delegations are being tested in the VRM pilot. | Decisions by June 2020 Rollout 2020/21 |
| 8) | Review training and capability of staff to provide and review geotechnical advice and how the advice informs VRM decisions. | Steve Taylor Director Heritage and Visitors | Detailed development of the VRM system through the pilot is testing the capability and capacity needs including level of technical advice. | Decisions by June 2020 Rollout 2020/21 |
| 9) | Consider increasing guidance on how to manage “natural hazards” in the General Policy for National Parks, National Park Management Plans | Steve Taylor Director Heritage and Visitors | Increased capacity in technical visitor advice through the creation of the Heritage and Visitor Unit will see a larger capacity to input into | On-going |

| | | | | |
|----|---|--|---|--|
| | and other statutory documents. | | policy and statutory documents. | |
| 10 | Consider whether it would be possible to reduce and/or combine some of the elements of the VRM Policy, Guidelines, SOP and online tool to reduce confusion, improve efficiency and decision making. | Steve Taylor Director Heritage and Visitors | Detailed development of the VRM system through the pilot is testing for alignment of documents. | Decisions by June 2020 Rollout 2020/21 |

Questions, comments and identified improvements

1. Were VRM processes used to assess further rockfall risk for visitors?

Was a VRM assessment for rockfall hazard undertaken for the Truman Track prior to work being undertaken?

In part. A visitor risk assessment for the Truman Track was carried out in October 2018. This assessment did not identify rockfall hazard as a concern.

Operations staff had previous experience¹⁰ in managing rockfall hazards and decided, after the rockfall July 2019, to obtain a geological assessment of the rockfall hazard which included an assessment of the risk to visitors. They did not use the online VRM tool to support assessing the risk or to record decisions and actions.

Operations staff did not refer to the Best Practice Guideline for rockfall or seek support from a Senior Visitor Advisor.

The Department's Best Practice Guideline for rockfall hazard¹¹ states that to mitigate the risk of rockfall to visitors, where the risk is believed to be high, staff should temporarily close the site or isolate visitors from the hazard, and publish a Visitor Notice on the DOC website. If the site is unstable, they should consider involving GNS Science to monitor the site and identify activity changes. They should obtain a

¹⁰ Dolomite Point Walk and Charming Creek Walkway

¹¹ Department of Conservation Managing Risks to visitors on public conservation lands and waters. Best Practice Guideline 3.1.18

geological report for the site and carry out mitigation recommendations. The guideline identifies that for sites with high numbers of visitors and high rockfall risk, or a complex mix of high and medium risk hazards, a standard hazard management analysis should not be undertaken, and instead support should be sought from a Senior Visitor Advisor to commission a complex risk assessment as part of the development of a specific hazard management plan.

Operations staff immediately closed the site after the rockfall occurred on 23 July 2019, erected a temporary barrier, installed warning signs and published a Visitor Notice. A geotechnical expert from WSP Opus was commissioned and visited the site with staff on 24 July 2019. A geological hazard assessment report was received from them on 6 August 2019.¹² This report identified the risk as 'borderline tolerable/unacceptable for current conditions.' *"With visitor growth and natural deterioration of the rock mass, the risk level will increase to unacceptable levels. Rockfall risk mitigation will be required to ensure the safety of visitors."*¹³ The report provided two options. Option one was to *"Remove hazard - removal of the remaining sandstone overhang. Option two was to "Install rockfall barrier - installation of a rockfall fence barrier or King Post Wall."*¹⁴

Operations staff then sought a further independent assessment¹⁵ which revealed water seepage through surface gravels and cracks in the underlying sandstone. Based on this information, Operations staff believed the remaining section of rock overhang posed a significant risk to visitor safety and made the decision to remove it. They sought advice from contractors on how to do this safely with minimal impact on the natural environment.¹⁶

The Department's Principal Advisor Visitor Risk reviewed the geotechnical advice provided to Operations staff, as part of this review. On investigation,¹⁷ the Principle Advisor Visitor Risk identified the process employed by the expert was like comparing risk to an Australian standard for developments like housing. He commented that it was not a suitable comparison to assess the risk of people walking the track. In his view, the risk assessment used a longer exposure time to the hazard and the risk was lower.¹⁸ The report produced by WPS Opus did not describe the actual amount of risk and if this had occurred, it may have led to further consideration and discussion on whether the risk was tolerable.

¹² A brief for expert advice was provided to WSP OPUS on 24 July 2019 refer e-mail 24 July 2019

¹³ Truman Track - Rockfall Assessment WSP Opus August 2019 Page 8

¹⁴ Truman Track - Rockfall Assessment WSP Opus August 2019 Page 9

¹⁵ The brief and the report/ advice were not available to the Investigation Team

¹⁶ Refer E-mail from A Black Geotech Ltd 9 August 2019

¹⁷ By the Principal Advisor, Visitor Risk

¹⁸ Refer e-mail dated 15 January 2020 Risk to an individual of doing 1 trip is 3×10^{-7} which is 1 chance in about 3 million and the risk of it happening to someone in a year is 1 chance in 79.

Improvements identified

Review the methodology for assessing rockfall hazards in the VRM Best Practice Guidelines to ensure it is clear when advice is to be sought and ensure Operations staff are well versed in this.

Improve the VRM system by developing appropriate quantitative risk thresholds and assessment methodologies to inform the procurement of specialist geotechnical advice.

Ensure Senior Visitor and Heritage Advisors are trained to provide appropriate guidance and advice to ensure this type of hazard is appropriately managed.

2. Did any assessment trigger 'seek advice' leading to an Assyst request being submitted? If so, what happened?

No. Operations staff did not use the on-line VRM tool to do a hazard assessment. If they had, one of three options would have been triggered. The first option is 'tolerable - management action optional', the second 'intolerable - management action required' and the third 'intolerable - seek advice'.¹⁹ 'Seek advice' means to seek advice from the Senior Visitor Advisor.²⁰ The Best Practice Guideline for managing rockfall hazard reinforces this.²¹

The Geotechnical Report assessed the risk as 'borderline tolerable/unacceptable for current conditions.' *"With visitor growth and natural deterioration of the rock mass, the risk level will increase to unacceptable levels."* This indicates that the online assessment for this site would likely have triggered 'Intolerable - management action required'. However, visitors were known to stand under the rock overhang and therefore the risk consequence could have been multiple fatalities and this assessment would have triggered 'intolerable - seek advice'.

Regardless of which option is triggered via the online tool, the action to seek advice from the Senior Visitor Advisor is in the 'Things to Consider Best Practice Guideline.' This needs to be used concurrently with the online tool. Operations staff did not refer to the Best Practice Guideline for rockfall. If they had, they would likely have identified the need to seek advice from the Senior Visitor Advisor to develop a specific hazard management plan.

However, Operations staff did notify the Senior Visitor Advisor and the Delivery Planner Operations of the rockfall on 23 July 2019, instead suggesting a site visit for 9

¹⁹ Managing Risk to Visitors on Public Conservation Lands and Waters SOP Page 21

²⁰ Managing risks to visitors on Public Conservation Land and Waters SOP Page 9

²¹ Managing risks to visitors on Public Conservation Lands and Waters Best Practice Guidelines Page 24

August 2019. The Senior Visitor Advisor for the Western South Island region was on annual leave from 26 July 2019 until 26 August 2019. No Assyst request was submitted, resulting in the Visitor Advice Manager having no visibility of the issue, and therefore another Senior Visitor Advisor was not assigned to support Operations.

Identified improvements

Ensure Operations staff understand they are required to follow the VRM Policy, use the online tool, Best Practice Guidelines and SOP, as a package for visitor risk management.

3. Was archaeological advice considered or requested?

Partly. Archaeological site location maps of the area were discussed by Operations staff, and the Operations Manager understood, from a conversation with Heritage New Zealand and looking at the map (appendix 2), that a known archaeological site was located to the north of the rock overhang.

Given the proximity of site records to the north and south of the rock overhang on Truman Track, Senior Heritage advice should have been requested. No request was made. There is no trigger in VRM to seek Heritage advice.

Identified improvements

Incorporate a trigger mechanism in VRM so that advice is sought from a Senior Heritage Advisor. The VRM should flag clearly that it is a legal requirement to have an Archaeological Authority Report logged and approved by Heritage New Zealand prior to any work taking place that results in the disturbance of soil. It should also flag that not doing so is an offence and staff can be prosecuted by Heritage New Zealand (as has happened in the past).

4. Was consultation undertaken with Iwi and/or stakeholders?

No. Operations staff did not consult with Iwi or stakeholders prior to work taking place. A meeting was set up to discuss the matter with the Chair of Te Runanga o Ngāti Waewae prior to work being undertaken. The Chair was not able to make the meeting and no follow-up was undertaken before the work occurred. The Chair was subsequently briefed by the Western South Island Operations Director on 1 November 2019 and by the Operations Manager Buller District. The Chair supported the Department's approach from a visitor safety perspective.²²

Identified improvement

²² Email 4 Nov 2019

Consider how to trigger consultation with Tangata Whenua for sites of cultural significance to Maori when visitor risk is being assessed.

5. Who approved the rock scaling for the location?

The Operations Manager, Buller District as per current delegations.²³

Identified improvement

Until a quantitative risk tolerance threshold is available, consider whether T4 is an appropriate level of delegation for decisions relating to hazards that trigger 'intolerable - seek advice.'

²³ The Senior Ranger /Supervisor Operations Recreation and Historic, Buller District Office was the Team Leader

6. Did any of the work exceed the WSP OPUS 'brief', and if so, what was undertaken?

No. The geotechnical report gave two options, as identified, and the work carried out was in line with the option chosen, recommending the Department to engage a suitably experienced contractor to scale back the overhang to the vertical batter (or flatter if possible). The overhanging sandstone was to be scaled back in small manageable blocks to prevent track damage and damage to the vegetation below the track.

This report discouraged the use of high explosives to prevent unnecessary blast damage to the surrounding rock mass and environment and suggested alternative non-explosive rock breaking products should be considered for this environmentally sensitive area. The ideal method *“is a simple controlled collapse of the overhang followed by scaling with hand tools. It is important to stabilise the fallen material to prevent material from rolling onto the track in the future. The estimated maximum volume of material required to be scaled is 30m³ equivalent to 70 ton.”*²⁴

The geotechnical report stated that *“considering the natural beauty of the area it is important that any scaling work be done as sympathetically as possible. Landscaping and planting of the scaled material is to be considered to restore a natural look of cut slope.”*²⁵

The Operations Manager dismissed the non-explosive option recommended by WPS Opus as unrealistic and stated that it would place the safety of staff and/or contractors at risk.

The Operations Manager then sought further advice from a ground stabilisation specialist whom staff had previously worked with and had confidence in.²⁶ The specialist concurred that the overhang should be removed, and advised the use of a high VOD (velocity of detonation) underground smooth wall blasting product.

The Operations Manager made his decision based on his experience that a shear explosive would be quicker, efficient and safe. A Construction Contract was written.²⁷

Removal of rock debris from the site, stacking of rock beside the track and vegetation restoration was carried out immediately after the overhang was removed.

²⁴ Truman Track – Rockfall Assessment WSP Opus August 2019 Page 9

²⁵ Truman Track – Rockfall Assessment WSP Opus August 2019 Page 9

²⁶ E-mail from A Black Geotech Ltd 9 August 2019 refer to Correspondence and technical reports in reference section

²⁷ Department of Conservation Truman Track Rock Remediation Construction Contract WSI -O-156

7. Did the work comply with all relevant policies and legislation? Was the West Coast Te Tai Poutini Conservation Management Strategy (the CMS) and/or Paparoa National Park Management Plan (the NPMP) and General Policy for National Parks (GPNP) applied appropriately?

No. Although the Paparoa National Park Management Plan allows for certain works on the Truman Track to provide for visitor safety, with constraints, prior to undertaking the work more consideration should have been given to:

1. preserving the natural, cultural and heritage values and geological features as outlined in the CMS and PNPMP; and
2. identifying alternative options to manage the rockfall risk to visitors, discussing all options with Tangata Whenua and interested parties.

These steps were not undertaken.

The relevant sections of the CMS, NPMP and General Policies are discussed below;

The CMS states *“the Department currently does not have a system for ranking the significance of geological features. Until such time as a system is in place, the Conservancy will use sources such as the New Zealand Geo-Preservation Inventory (NZGI; maintained by the Geological Society of New Zealand) to identify, protect and advocate for internationally, nationally and regionally significant sites. The inventory is based on the combined knowledge and advice of a large sector of New Zealand’s geological, geomorphological, speleological and soil science community. It aims at listing sites that are unique, important, and the best representative examples of New Zealand’s diverse earth science heritage. The NZGI identifies 194 significant sites in the West Coast Tai Poutini Conservancy (Appendix 6). They include a range of minerals, rock types, structural rock formations, fossils and landforms that are of particular scientific, educational, aesthetic or recreational value. Twenty-four of the sites have been rated as internationally important, 60 as nationally important, and 110 as regionally important. The listing in Appendix 6 excludes sites that are significant for their historic values; historic places are covered in Chapter 3.4.”*²⁸

The CMS also states, *“As at 2010, inventory and assessment of the Conservancy’s historical and cultural heritage is incomplete. This knowledge gap means that the suite of actively managed sites (see Section 3.4.2.3) may not be fully representative of the range of historical and cultural heritage located in West Coast Te Tai o Poutini public conservation lands.”*²⁹

²⁸ West Coast Te Tai Poutini West Coast CMS 2010-2020 Pages 91- 92

²⁹ West Coast Te Tai Poutini West Coast CMS 2010-2020 Pages 100

The Geo-Preservation Inventory³⁰ map identifies the wider geographic area at Te Miko as a geo-preservation site. However, the CMS Appendix 6 does not list this geographic area or the rock overhang or Te Miko as significant geo-preservation sites.

The NPMP has a natural value objective to preserve and protect significant geological features [...]in the Park³¹.

The Truman Track is located within the Nīkau Place in the NPMP. The Plan acknowledges that *“State Highway 6 (the Highway) is one of the main routes and provides visitors with an opportunity to experience the dramatic scenery of the coastal fringe of this Place. It is part of the West Coast Heritage Highway and a significant tourist, commercial and recreational link between Greymouth and Westport. Increasing numbers of visitors are using the Highway to gain access to Punakaiki township, Dolomite Point, Truman Track and local tracks. It is important that the Highway and surrounding facilities safely provide for the needs of visitors and the local community. Certain works may be necessary within Paparoa National Park boundaries to achieve this.”*³²

An outcome for Nīkau Place in the NPMP is for prominent landscape and geological features to remain in their natural state. Away from these, structures may be present where they blend into the landscape or where buildings already exist. (page 72). By virtue of the reference to structures and buildings, the implication is that this objective refers to prominent geological features of a larger scale than the rock overhang on the Truman Track, but this is not explicit.

The NPMP identifies that cultural heritage sites inside the Park include two rock shelters and small sea caves at Te Miko.³³ The AMIS Archaeological site records show these sites to the north and south of the rock overhang on the Truman Track.³⁴

The GPNP identifies that “Activities which diminish the quality of scenic, geological (including geothermal), soil and landform features and other abiotic diversity within national parks should be avoided”.³⁵ The policies for natural hazards states that;

“7(c) When a high level of risk to people, places, taonga or property from a natural hazard in a national park has been identified, a hazard and risk management plan should be developed by the Department.

³⁰ Geo-preservation Inventory map Appendix Two

³¹ Paparoa National Park Management Plan 2017 Page 32

³² Paparoa National Park Management Plan 2017 Page 69

³³ Paparoa National Park Management Plan 2017 Page 34

³⁴ Location of archaeological sites Appendix Two

³⁵ General Policy for National Parks Page 27

7(d) The Department, when developing a hazard and risk management plan, will:

i) consult with tangata whenua and other interested people and organisations on the identification of options to address risks; and

ii) inform tangata whenua and other interested people and organisations of any proposed actions.

7(e) Natural hazard risk assessment will be a key component of national park planning, including the location and construction of all facilities in national parks.

7(f) Preference will be given to hazard mitigation that does not require structures to be built inside the national park.

7(g) The Department should provide information to enable people to assess the risks from natural hazards that may occur or arise in national parks.

7(h) The Department may notify the closure of a national park or any part of a national park to public entry when it considers there to be imminent danger to people and property that cannot be reasonably avoided by other means.

7(i) People will be responsible for their own decisions on the risks that they are prepared to take arising from natural hazards in national parks. “³⁶

Although the Truman Track rock overhang is not specifically identified in the CMS or NPMP, there is enough guidance and policy that higher priority should have been given to preserving the rock overhang and consideration needed to be given to identifying alternative options to manage the risk to visitors.

Improvements identified

Ensure Operations staff are familiar with the statutory documents for their region and understand the importance of ensuring their work complies with these documents.

Consider how to trigger checking the Department’s statutory documents when visitor risk is being assessed.

Consider how to trigger a check of the Geo-Preservation Inventory lists when visitor risk is being assessed.

8. Was other relevant legislation considered appropriately prior to action?

Partly. The immediate visitor safety work undertaken was carried out as emergency management and repair, covered by rule six of the Regional Land Management Plan and the volume of rock to be scaled/removed is a permitted activity. Resource

³⁶ General Policy for National Parks Pages 35-36

consents were obtained to undertake earthworks within 50 metres of the Coastal Marine Area.³⁷

The Heritage New Zealand Pouhere Taonga Act 2017 requires any archaeological site, whether it is recorded or unrecorded to be protected. Where there is a proposed activity in the vicinity of a known archaeological site or historic site, that could impact negatively on its fabric there is a requirement to seek an Archaeological Authority from Heritage New Zealand, prior to the work being executed. Given the proximity to a known archaeological site a site investigation should have been undertaken by a suitably qualified archaeologist.

The Ngai Tahu Claim Settlement 1998 states for Paparoa National Park that the department, as the relevant land management agency is required to “actively protect” cultural heritage sites of relevance to Ngai Tahu. As noted, consultation with iwi did not occur.

Improvement identified

Consider how to trigger consultation with tangata whenua for sites of cultural significance when visitor risk is being assessed.

Consider how to trigger an Archaeological Authority or the need for a field-based heritage assessment when visitor risk is being assessed.

9. Were the principles of the VRM Policy applied?

The relevant VRM principles, and if they were applied, are:

“The range of outdoor recreation experiences available to visitors will be preserved wherever possible”.

Applied in part. Preserving the visitor activity was given priority. However, there is no record whether the need to preserve the activity to maintain the range of outdoor recreation experiences across the region or that activity in that unique landscape/environment was considered.

“DOC is responsible for assessing the risks at visitor destinations and providing information to inform visitors of those risks”.

Applied in part. The assessment of the risk is discussed earlier in this document. Regards informing visitors of the risk, the Best Practice Guideline for rockfall hazard³⁸

³⁷ Truman Track, Te Miko and RC 2019-0091 Land Use Consent & 2019-0092 Coastal Permit

³⁸ Managing Risks to Visitors on Public Conservation Lands and Waters. Best Practice Guideline. Department of Conservation Page 24

on a Short Stop Traveller Track identifies that *“permanent onsite hazard warning signs should not be used unless recommended in a geological hazard report or considered appropriate by local manager.”* Providing information to visitors as a long-term option to manage the hazard was ruled out based on the geotechnical advice.

Signs and a Visitor Notice on the DOC website were provided as a short-term measure. This was not considered to be an appropriate long-term action by staff due to ‘felt’ accountability for visitor safety. Staff noted that *“the site can be difficult for holding visitors back, no matter how many signs and barriers are used.”*

“All practicable steps will be taken to ensure DOC facilities are appropriate for the predominant visitor group and/or activity and meet all statutory obligations.”

Applied in part. Operations staff identified that the risk tolerance of ‘Short Stop Travellers’ is lower than for other visitor groups. Because of the gaps in the risk management system, as identified above, and the staff’s high level of ‘felt’ accountability, they concluded that intervention was required.

Unspecified works to manage visitor safety in the National Park were enabled through the NPMP. However, all statutory obligations were not met regarding the protection of natural, heritage and cultural values; exploring alternative management options and iwi consultation as discussed earlier.

“The level of skill and competence required for visitors to manage risks will be accurately represented.”

Not applied. Instead of identifying the level of skill and competence required for visitors to manage the risk, the hazard was removed.

“Visitors are responsible for their decisions about the risks they take and for any others under their care and responsibility” and “Visitors are responsible for providing the skills, competence and equipment they require to effectively manage hazards.”

Not applied. Instead of providing information to enable visitors to make decisions about the risks they take, the skills they need, their competence and equipment requirements, the hazard was removed.

“DOC will prioritise management at popular sites which have a high level of risk and a high volume of low skilled visitors.”

Applied. Management was prioritised at this popular site.

Improvement Identified

Ensure staff have a good understanding of the VRM Guiding Principles and how to apply them so their level of ‘felt’ accountability does not exceed the Department’s

statutory responsibilities and the actions they take are aligned to the VRM Guiding Principles.

10. Was any form of geophysical/natural landscape assessment applied in this situation?

No formal assessment was applied in deciding whether or not to protect the rock overhang. However, staff considered the best way to mitigate the impacts of removing the overhang on the natural landscape.³⁹

Improvement identified

Consider how best to ensure impacts on the landscape values are integral to visitor risk management decisions.

11. Could the rockfall hazard risk be mitigated/managed in a different way?

Yes. Other options to manage the risk could have been identified and analysed by using the Department's Team Process. For example:

- Closing the entire track temporarily while further advice was sought.
- Monitoring movement and calculating the future likelihood of the collapse of the overhang.
- Closing the track at the top viewing platform and installing barriers and permanent warning signs.
- Using signs to encourage visitors to stay on the track and move through the hazard zone quickly.
- Closing the Truman Track permanently
- Rerouting the track - While this option may not have been possible, this option could have been recorded.

Were any other comparative examples considered? If so, how did this work compare?

No. A social process exploring alternative management options did not occur.

However, staff discussed the Cape Kidnappers Rockfall Investigation⁴⁰ as a result of which, they felt the need to take action to prevent a fatality from occurring.

³⁹ E mail from Senior Ranger to A Black Geotech Ltd regarding methodology and WSP OPUS report dated 17 September 2019 Page 2 refer to Correspondence and technical reports in reference section

⁴⁰ E mail from Senior Ranger to WSP OPUS 11 September 2019 refer to Correspondence and technical reports in reference section

References

General Policy for National Parks 2005

<https://www.doc.govt.nz/globalassets/documents/about-doc/role/policies-and-plans/general-policy-for-national-parks.pdf>

West Coast Te Tai Poutini Conservation Management Strategy 2010

<https://www.doc.govt.nz/globalassets/documents/about-doc/role/policies-and-plans/west-coast-cms-2010/westcoast-cms-complete.pdf>

Paparoa National Park Management Plan 2017

<https://www.doc.govt.nz/globalassets/documents/about-doc/role/policies-and-plans/national-park-management-plans/paparoa/paparoa-national-park-management-plan.pdf>

[Department of Conservation Visitor Risk Management Policy](#)

[Managing risks to visitors on public conservation land - Best Practice Guideline](#)

[Managing risks to visitors on public conservation lands and waters SOP](#)

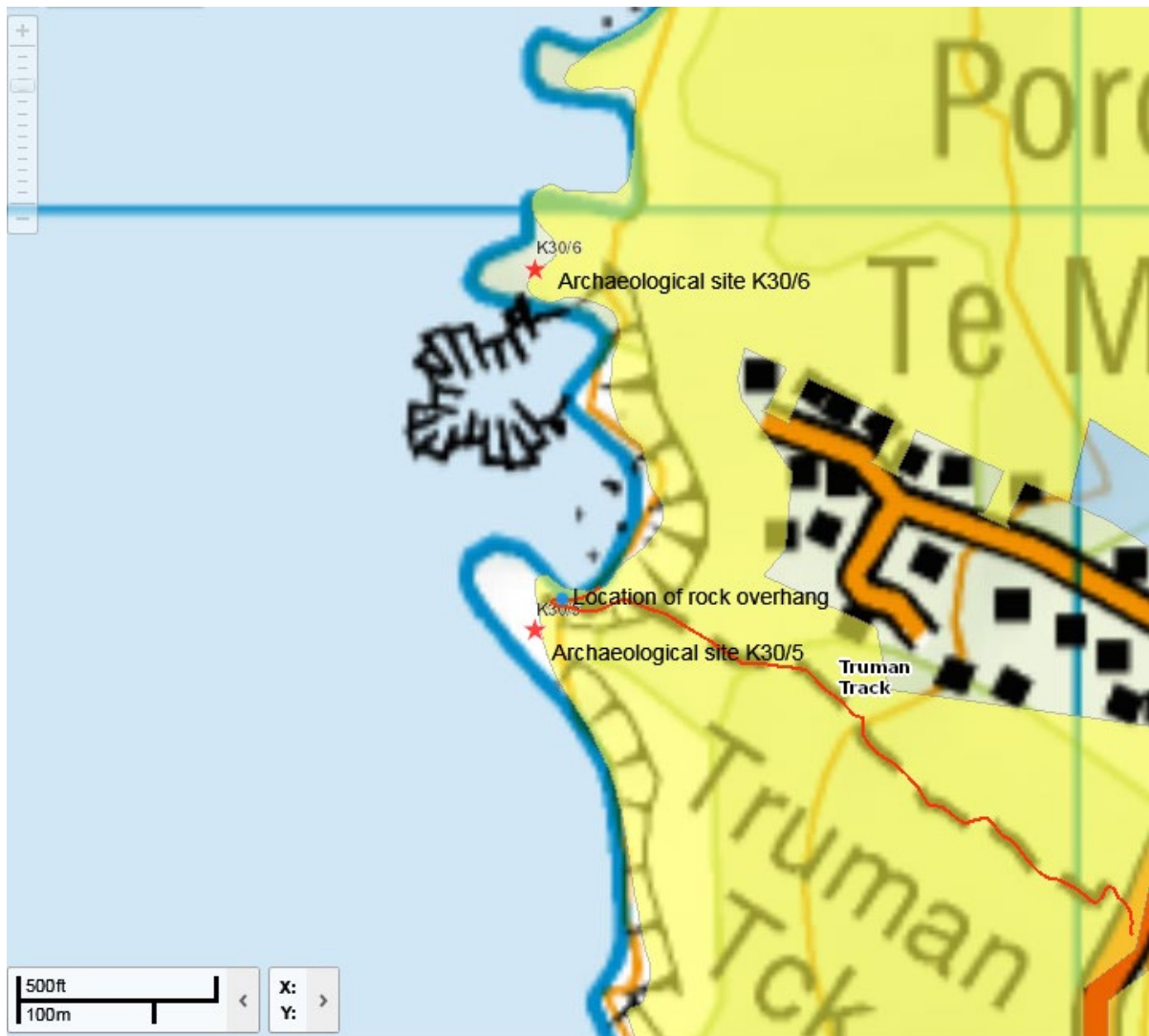
[Correspondence and technical reports \(redacted\)](#)

APPENDIX ONE

| TIMELINE | |
|--------------|--|
| Date | Event |
| October 2018 | A visitor risk assessment was undertaken of Truman Track. No rockfall hazard was identified. |
| 23 July 2019 | Rockfall occurs on the Truman Track. This area of track is isolated with a barrier with warning signs and the Paparoa National Park Visitor Centre is notified. |
| 23 July 2019 | Senior Ranger notifies Senior Visitor Advisor and Delivery Planner Operations to arrange a site visit for 9 August 2019. |
| 24 July 2019 | Onsite geotechnical risk assessment by OPUS procured. |
| 24 July 2019 | OPUS provided with visitor counter data and photos of visitor behaviour. |
| 24 July 2019 | OPUS provide site observations giving their opinion that signs or barriers will not keep some visitors away from hazards. |
| 25 July 2019 | Operations staff agree that it will be difficult to hold visitors back “no matter how many signs or barriers are used” and consider removal of the rock overhang. |
| 29 July 2019 | Additional high barriers and warning sign are put in place at the first viewing platform. |
| 29 July 2019 | Operations staff identify potential contractors who could carry out the rock scaling. |
| 5 Aug 2019 | Operations staff discuss the scope of works for rock scaling and identify profile blasting as the best option to minimise disturbance to the site. Staff discuss best practice to manage visitor safety while work is undertaken. |
| 6 Aug 2019 | OPUS report is received and is shared with a potential contractor. Consideration is given to how to avoid damaging the natural beauty of the area. A controlled collapse of the overhang followed by scaling with hand tools, is agreed. |
| 9 Aug 2019 | The potential contractor is asked for a quotation and concurs that the option to remove the overhang is the right approach. |
| 9 Aug 2019 | OPUS advise the key thing is to bring the overhang down gently, regardless of methodology and products used. |
| 9 Aug 2019 | Quote accepted from Geotech Ltd. Work programmed to occur week 12 August 2019 |
| 19 Aug 2019 | Overhang confirmed as being removed and Operations staff work with the contractor to clear the site. |
| 21 Aug 2019 | Staff apply for Resource consent. |
| 22 Aug 2019 | Resource consent received. |
| 3 Sept 2019 | Post construction inspection takes place. |
| 12 Sept 2019 | OPUS post construction inspection report received concludes removing the overhang had reduced the rockfall risk to an acceptable level. |

| | |
|-------------|--|
| 11 Oct 2019 | Report received from WSP OPUS on Truman Track Lower Bay - geotechnical inspection. |
|-------------|--|

APPENDIX TWO



Truman Track in relation to recorded archaeological sites

NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION

| | |
|-----------------------|-------------------------|
| SITE RECORD INVENTORY | NZAA SITE NUMBER: K30/5 |
|-----------------------|-------------------------|

Supporting documentation held in ArchSite

AW BA AK AA AA AQ

| | | |
|--|--|---|
| NEW ZEALAND ARCHAEOLOGICAL ASSOCIATION SITE RECORD FORM | | SITE NUMBER S 37/4 |
| Map number S 37. Map name Punakaiki Map edition 2nd - 1971. Grid Reference 854 336 | | MAORI SITE NAME: OTHER |
| | | CAVES SITE TYPE |
| 1. Aids to relocation of site <u>E 4854 00 N 1316 00</u> A large cave beneath a small headland with openings to north and south. | | |
| 2. State of site; possibility of damage or destruction In good condition. Minimal likelihood of damage. | | |
| 3. Description of site <i>(NOTE: This section is to be completed ONLY if no separate Site Description Form is to be prepared.)</i> Floor of cave strewn with mussel shells and cooking refuse | | |
| 4. Owner Part Punakaiki Address Scenic Reserve | | Tenant/Manager Address Attitude Attitude |
| 5. Methods and equipment used Photographs taken: Yes/No (Describe on Photograph Record Form) Date recorded | | |
| 6. Aerial photograph or mosaic No. | | Site shows: Clearly/badly/not at all |
| 7. Reported by Commissioner of Crown Lands, P.O. Box 123, HOKITIKA. | | Filekeeper M. E. Trotter, Canterbury Museum. |
| Date 31 August, 1973. | | Date 25 September, 1973. |



Geo-preservation Inventory identifying the geo-preservation area that includes part of Truman Track <https://services.main.net.nz/geopreservation/>