



13 May 2024

Tom Hopkins
Milford Opportunities Project
thopkins@milfordopportunities.nz

High Level HAIL Assessment of Nodes MOP

6-VO060.00_CLM_LET_005_HAIL Assessment

Dear Tom,

Overview

WSP New Zealand Limited (WSP) was commissioned by the Milford Opportunities Project (MOP) to undertake a high-level HAIL assessment relating to proposed development opportunities along the Te Anau-Milford Highway (SH 94) in the Te Rua-o-Te-Moko Fiordland National Park.

The MOP Masterplan incorporates a series of proposals to rethink and redevelop the Milford Corridor for a more sustainable and enjoyable visitor experience. The locations to be assessed have been earmarked as stop-off points for visitor experiences (herein referred to as nodes). As such, development of new bus shelters and viewing points, or redevelopment of existing infrastructure and accommodation is proposed to facilitate tourism.

The Ministry for the Environment (MfE) created a list of potentially contaminating activities and industries in October 2011. This Hazardous Activities and Industries List (HAIL) is a compilation of the activities and industries likely to cause land contamination resulting from hazardous substance use, storage or disposal (Ministry for the Environment, 2011b).

A high-level HAIL assessment has been undertaken for the proposed nodes to better inform business case options and requirements for further in-depth site investigations. Each node has been assessed and categorised in one of the following categories:

- **GREEN:** HAIL activities (current or past) are unlikely;
- **ORANGE:** HAIL activities (current or past) are possible; and
- **RED:** HAIL activities (current or past) are likely or known.

Note: Historical aerials and photography relied on for this assessment have not been included in this report, however, can be made available by WSP upon request.

Objective

Preparations of the HAIL assessment under the National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health (NESCS) Regulations (2011) will provide information as to whether soil contamination from historic or current day activities, as described on the HAIL, are likely to be present, and if so, whether they are at levels that could adversely impact human health.

This report will better inform the MOP feasibility assessment and business case phase and give an indication as to further site investigations required under the NESCS Regulations 2011, relating to human health impacts from potentially contaminated land.

As such, the following objectives have been identified:

- Determine whether potentially contaminating activities have been undertaken at the nodes or their surrounds;
- Assess the risk associated with these potential contaminants to affect human health of the environment;
- Determine the likely impact upon sensitive receptors including site users, occupiers and construction workers on the site; and
- Give details of future investigations; if required.

Scope of Work

This HAIL assessment included the following:

- Site walkover to assess current site conditions;
- Review of previous reports and information provided by the client pertaining to the site;
- An assessment of historical information relating to the site and its surroundings, including the review of historical aerial photographs;
- A review of local authority records and searches of the Environment Southland (ES) Beacon web portal for contaminated sites;
- Site characterisation indicating whether the site has been subject to HAIL activities and the potential health and environmental risks associated with the site if HAIL are considered present.

This HAIL assessment has been reviewed by a Suitably Qualified and Experienced Practitioner (SQEP), as required by the NESCS Regulations 2011.

Desktop Review

Node 1 – Gateway

Proposed development

The masterplan proposes to install a large drive through sign, marker or artwork signalling the entrance into the Te Rua-O-Te Moko Fiordland National Park. A shared trail might start off the Milford-Te Anau Rd. However, due to spatial constraints, no infrastructure will be developed at this node.

Contaminated sites register

The ES Beacon web portal contains a register of sites that may have been subject to activities or industries listed on the HAIL. A review of the register reveals that the site has not been recorded on the database as (potentially) contaminated.

Investigation reports

No previous soil investigation reports were available.

Historical aerals

Since the earliest photographic aerial taken in 1967, the Milford-Te Anau Rd can be seen. The area has historically been used for sheep farming with a shed seen east of the proposed node. The 1986 aerial shows some ground disturbance with a dark coloured patch seen east of the road.

Site walkover findings

Unlike the other nodes, the proposal for Node 1 does not include creating a stopover point but rather a drive-through as the visitor enters Te Rua-o-Te-Moko Fiordland National Park.

When driving through the site the contrast was noted between the open grasslands before and the dense native beech forest after the proposed 'Gateway'. The area alongside the road comprises a generally flat, vacant landscape. No significant waterways or possible sources of contamination were noted.

HAIL Category

It is considered unlikely that HAIL activities are currently or have been occurring on the site. As such, Node 1 has been designated as HAIL category **GREEN**.

Node 2 – Eglinton Reveal

Proposed development

It is understood that the masterplan proposes that access into the national park would be managed from this point onwards. An entrance barrier will limit vehicle access and support facilities will be developed such as a car park, public toilets, etc. The establishment of several viewing areas and a river trail is proposed.

Although not directly related to this node, the Countess Range track and hut proposal is located relatively nearby, so it has been addressed here. A new walking track is proposed along the Countess Range accessed near the Walkers Creek campsite. Potentially contaminating activities along the route of the proposed trail are considered highly unlikely and no extensive ground disturbance is expected. As such, no further HAIL assessment has been undertaken for the trail route along the Countess Range. Should deviation from the current proposed route be considered, which may realign the route to pass through or near historic camps created during the construction of the Milford Road, further assessment of the risks to human health associated with potential HAIL activities may be warranted.

Contaminated site register

The site and surrounding area are not registered on the ES database as a HAIL site.

Investigation reports

No previous environmental site investigation reports are known to WSP.

Historical aerals

Historical aerals were reviewed from 1967 to 2023. The site was vacant during this period. The 1967 aerial showed some timber stockpiles possibly stored for the construction of a nearby bridge. Several creeks can be seen branching off the Eglinton River in the surrounding area. Some flooding was noted on the 1978 aerial east of the site.

Site walkover findings

The Eglinton Reveal is a popular stopping point for visitors as a photo opportunity. The site lies on the valley flat with high mountains around. An informal walking track was noted

towards the Eglinton River, approximately 200m to the east. The area surrounding the road was generally flat with native beech trees surrounding the larger area up to the mountain ranges. A flat terraced area was noted east of the road.

HAIL Category

It is considered unlikely that HAIL activities are currently or have been occurring on the site. As such, Node 1 has been designated as HAIL category **GREEN**.

Node 3 – Te Huakaue Knobs Flat

Te Huakaue Knobs Flat has been identified by ES as a HAIL site due to the former use of the site as a Ministry of Works campsite. Several previous investigations relating to the removal of underground petroleum storage systems have been collated by WSP.

As part of the MOP feasibility phase, a Preliminary Site Investigation (PSI) has been undertaken by WSP for the site. As such, reference should be made to the PSI for further detail on the contamination risk assessment.

The site has been assessed as HAIL category **RED**.

Node 4 – Ōtāpara Cascade Creek

Proposed development

The masterplan includes the expansion of the existing Ōtāpara Cascade Creek campsite with new accommodation facilities. Several walking tracks will be developed, including a route linking up with The Divide.

Contaminated site register

The site is not recorded as a HAIL site on the ES database.

Investigation reports

No previous soil investigations were available.

Historical aerals

The 1939 photographic aerial reveals that approximately 35 dwellings have been built in the northern part of the site. In addition, multiple huts were constructed east of the site.

Ōtāpara Cascade Creek flows south around the site with a small creek to the north-west connecting the main creek with Lake Gunn.

Prior to 1967, the dwellings in the northern part have been removed. An informal track is noted leading towards the area. The huts in the east remain with a large new dwelling constructed.

The aerial of 1977 shows that the huts in the eastern part of the site have been moved around on the site with new dwellings constructed. Some ground disturbance has been noted at the former camp location in the northern part of the site. In 1983 some pieces of timber and possible earthwork bunds have been noted in this area.

All of the eastern huts and dwellings have been removed prior to 1983 except for one large dwelling with facilities. It has been noted that the main riverbed has also moved slightly over this time.

Since 2003, the area has been vacant. In 2010 some parking areas have been noted for camper vans that have been further expanded in 2019.

Site walkover findings

Ōtāpara Cascade Creek is currently operated as a DOC campsite. The main camping areas are gravelled with toilet facilities noted. Several tents and self-contained campervans were seen on site. Ōtāpara Cascade Creek flows south along the site with grasses and lupins on the banks. Steep mountain ranges were noted west of the site, emerging from the beech forest that surrounds the flat site.

HAIL Category

Anecdotal evidence suggests that Ministry of Works campsites generally comprised prefabricated timber huts, that were moved along during the construction of the Milford Road. This could explain the sudden removal of the huts noted on the aerial photography. However, as some earthwork bunds were noted on the 1983 aerial and due to findings at the similar Te Huakaue Knobs Flat campsite revealing the presence of underground petroleum storage tanks, HAIL activities may have occurred at Ōtāpara Cascade Creek in the past.

As such, the site has been classified as HAIL category **ORANGE**.

Node 5A – The Divide

Proposed development

It is understood that Node 5 includes two stops: The Divide and Whakatipu Trails Head. The Divide currently comprises a car park with shelter facilitating the start/end of several walking trails. The masterplan proposes to maintain the existing use of the facilities with possible redevelopment of several walking tracks. It is understood that no infrastructure development is proposed at this stage.

Contaminated site register

The site is not recorded on the ES database as a HAIL site.

Investigation reports

No previous reports have been obtained or reviewed for this site.

Historical aerals

Photographic aerals show ground disturbance north of the current carpark from 1939 – 1988. This appears to be for the installation of a box culvert and associated maintenance, or replacement works over the years as the area is known to be affected by debris flow.

The current carpark area seems to consist of native bush until the carpark was constructed during the 1990s. Anecdotal evidence from MOP suggests that The Divide has been a carpark servicing the Routeburn and Key Summit tracks for decades. The carpark has progressively been expanded and developed to its current extent over that period. The existing shelter has been present on the site since the early 1990s and can be seen on aerial imagery since 2006.

The surrounding area comprises native bush.

Site walkover findings

The site currently comprises a large, gravelled parking area. A shelter and information hub are located in the centre of the site with information boards on the surrounding ecology and environment.

HAIL Category

It is considered highly unlikely that HAIL activities are currently or have been occurring on the site. As such, Node 5 – The Divide has been classified as HAIL category **GREEN**.

Node 5B – Whakatipu Trails Head

Proposed development

The second stop on Node 5 is the Whakatipu Trails Head. The site currently comprises a carpark at the start/end of multiple walking trails. The masterplan proposes to construct a shelter with living classroom for cultural education opportunities. Toilets will be built, and several walking tracks redeveloped.

Contaminated site register

The site is not recorded on the ES database as a HAIL site.

Investigation reports

No previous reports were readily made available for this site.

Historical aerials

The photographic aerials show the current location of the carpark to be native bush until 1977 when a small carpark was created with a bridge crossing the river. The carpark was expanded southwards in 2019.

Site walkover findings

The site comprises a carpark with long drop toilet that facilitates several walking trails. The carpark is gravelled and surrounded by trees.

HAIL Category

The site has been classified as HAIL category **GREEN**, due to it being unlikely that HAIL activities have been or are currently occurring.

Node 6 – Gertrude Valley

Proposed development

The site currently comprises a carpark facilitating an advanced walking track or viewing opportunity of the basin. The proposed development includes building a new shelter and toilets. A new, more accessible walking track with viewing platform is proposed. Some flood management measures might be required.

Contaminated site register

The site is not recorded on the ES database as a HAIL site.

Investigation reports

No previous reports were readily made available for this site.

Historical aerials

The historic aerial from 1938 shows several huts on the site and some materials stored in a stockpile. These buildings were removed prior to 1967 with only one small hut and a large dwelling remaining. The rest of the site is vacant with some flood evidence noted.

Since 2019 the site has mainly been used as a carpark with a small shelter.

Site walkover findings

The site comprises a gravelled carpark area with several notice boards regarding the surrounding environment, pest control and mountain safety awareness. Steep cliffs with waterfalls coming down encompass the valley. A creek flows along the eastern part of the site originating from the mountain ranges in the north of the valley and flowing southwards underneath the Milford Road. Evidence of past rockfall events and landslides was noted from the range east of the carpark. The NZAC Homer Hut is located in the northern part of the site.

HAIL Category

Construction of the Homer Tunnel commenced in 1935 as the next stage of the Milford Road connection from Te Anau to Milford Sound Piopiotahi. As previously mentioned in the assessment of Node 4 – Ōtāpara Cascade Creek, the MoW campsites more often than not comprised prefabricated timber huts that got moved along during the construction of the Milford Road. As such, it is considered likely that the buildings were completely removed from the site when no longer required. Due to the temporary nature of the campsite and small scale compared to other sites such as Te Huakaue Knobs Flat and Ōtāpara Cascade Creek, it is considered unlikely that contaminants of concern are present in sufficient quantities as to be considered HAIL.

As such, the site has been classified as HAIL category **GREEN**.

Node 7 – Cleddau Cirque

Proposed development

The site currently comprises a small carpark area off the main road allowing for picture opportunities. The proposed development includes building a new shelter and expanding the carpark for a short bus stop.

Contaminated site register

The site is not recorded on the ES database as a HAIL site.

Investigation reports

No previous reports were readily made available for this site.

Historical aerials

The historical aerial photographs show the site as the verge of the Te Anau-Milford Rd until a small pull-over area was created in 2011.

Site walkover findings

The Cleddau Cirque is located off the second bend of the Milford Road, after the Homer Tunnel. The area is a popular stop-off point for visitors as short photo opportunity of the expansive views of the underlying valley. The site comprises a small gravel carpark with fencing indicating no further access. The large rock wall and associated Homer Tunnel were noted south-east of the site. A gravel stockpile was noted on the carpark.

HAIL Category

Historical aerials and the site walkover suggest the site was created a safe stop-over for visitors to take pictures. Due to the remote location of the site, it is assumed that the fill material for the construction of the carpark would originate from the surrounding area. No concerning activities were noted on the aerials nor on site, and as such the site has been classified as HAIL category **GREEN**.

Short Stop – The Chasm

Proposed development

The Chasm is currently a short stop between the Homer Tunnel and Milford Sound Piopiotahi for viewing a series of waterfalls through water-sculpted rocks. The proposed development includes repurposing the carpark to service a hop on/hop off bus service and express coaches with a small area for short-term vehicle parking. Additional infrastructure may include a weather/bus shelter, interpretative displays, and toilet facilities. The site will be designed to accommodate an emergency evacuation area in the event of a disaster in Milford Sound Piopiotahi.

Contaminated site register

The site is not recorded on the ES database as a HAIL site.

Investigation reports

No previous reports were readily made available for this site.

Historical aerials

A review of photographic aerials shows the site as a carpark or pull-over bay along the Milford Road. The waterfalls can not be distinguished through the surrounding native bush.

It should be noted that the 1938 aerial shows a large temporary campsite approximately 300m north of the site, presumably for the construction of the Milford Road. This is the only aerial that shows any evidence of the campsite.

Site walkover findings

No site walkover was undertaken as part of this investigation.

HAIL Category

Historical aerials and anecdotal evidence suggest the site was created for use as a carpark to facilitate a walking track to the waterfalls. Due to the remote location of the site, it is assumed that the fill material for the construction of the carpark would originate from the surrounding area. A temporary campsite was noted in the 1938 aerial; however, it is considered to be at a sufficient distance of the site such that it is highly unlikely for there to be contaminants of concern in sufficient quantity as to be considered HAIL. As such the site has been classified as HAIL category **GREEN**.

Conclusions and Recommendations

A high-level HAIL assessment was undertaken for the proposed nodes in the MOP Masterplan.

A summary of the HAIL classification for each node is provided in Table 8-1 below.

Table 8 1: Summary of HAIL assessment.

Node	HAIL Category	Notes
Node 1 – Gateway	Green	/
Node 2 – Eglinton Reveal	Green	/
Node 3 – Te Huakaue Knobs Flat	Red	Verified HAIL site. PSI undertaken as part of MOP feasibility phase.
Node 4 – Ōtāpara Cascade Creek	Orange	Possible HAIL site (unverified). PSI recommended prior to any proposed land use change or soil disturbance.
Node 5A – The Divide	Green	/
Node 5B – Whakatipu Trails Head	Green	/
Node 6 – Gertrude Valley	Green	/
Node 7 – Cleddau Cirque	Green	/
Short Stop – The Chasm	Green	/

Node 3: Te Huakaue Knobs Flat has been identified as a verified HAIL site. As part of the MOP feasibility phase a PSI was undertaken for the site with recommendations made for further detailed investigation of identified Pieces of Land as per the NES-CS Regulations.

Node 4: Ōtāpara Cascade Creek has been assessed as a potential HAIL site due to the historic operation of the site as a Ministry of Works campsite during construction of the Milford Road. It is considered likely that the campsite involved storage of heavy machinery and fuel, and possible waste disposal to land. As such, further investigation in the form of a PSI is recommended for Node 4.

The remaining nodes have been assessed as unlikely to be associated with activities described on the MfE's HAIL.

Regards,



Tara Verhulst
Environmental Scientist
Tara.Verhulst@wsp.com



Lisa Bond CEnvP
Principal Contaminated Land Specialist
Lisa.Bond@wsp.com