

REPORT

Milford Dart: Draft Operation Environmental Management Plan



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Prepared for

Milford Dart Limited

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42163947

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Section 1

Introduction

1.1 Purpose

Milford Dart Limited has applied to the Department of Conservation (DoC) for concessions under the Conservation Act 1987 and the National Parks Act 1980, with respect to the investigation, construction, operation and maintenance of a ~10.4 km land transport tunnel and associated facilities in Fiordland and Mount Aspiring National Parks.

Resource consent applications under the Resource Management Act 1991 will be made to Southland District Council, Queenstown Lakes District Council, Southland Regional Council and Otago Regional Council (the 'resource consent authorities') in the near future.

This document represents the Draft Operation Environmental Management Plan (OEMP) for the project. The purpose of the OEMP is to:

- a) provide a framework for environment management of the operation phase; and
- b) demonstrate to DoC and resource consent authorities that operation effects on the environment can be appropriately managed, and where potentially considered adverse, the effects can be avoided, remedied and mitigated.

The vision and objectives of this OEMP are outlined in Section 2.

An equivalent environmental management plan has been prepared for the construction phase (CEMP).

1.2 Status of OEMP

The current phase of the project is the pre-feasibility concept design and concession application phase. In this regard this OEMP should be considered as a draft of the final OEMP. It is expected that this OEMP will be expanded and periodically updated as design advances and the project progresses into construction, particularly to capture any concession and consent conditions that arise out of consenting processes. In addition, any developments of the proposed tunnel concept that come out of the design and construction phases of the project will be incorporated into the draft OEMP in order to produce the Project OEMP.

Milford Dart Limited, and its representatives, will work with the relevant regulatory authorities throughout the project to ensure that the final Project OEMP meets the needs and requirements of all the stakeholders in the tunnel facility.

The OEMP will also be used as the template for the future operator(s) of the project to develop detailed and specific supplementary environmental management plans and procedures, including but not limited to:

- Vehicle Safety
- Tunnel Safety
- Traffic Management Plan
- Rehabilitation Plan
- Stakeholder Communication Plan.

Section 1

Introduction

1.3 Legislation

In addition to the requirements of this OEMP, the Milford Dart project will be subject to compliance and, where relevant, approvals under the following legislation (note list is not necessarily exhaustive):

- National Parks Act 1980
- Conservation Act 1987
- Resource Management Act 1991
- Crown Minerals Act 1991
- Building Act 2004
- Historic Places Act 1993
- Biosecurity Act 1993
- Health and Safety in Employment Act 1992
- Hazardous Substances and New Organisms Act 1996.

1.4 Structure of this Report

The remainder of this report is structured as follows:

- *Section 2 – Vision and Objectives*
The vision and objectives that provide the framework for this OEMP.
- *Section 3 – Operation Activities*
A summary of the Milford Dart project and the operational concept for the facility.
- *Section 4 – Operation Planning*
An overview of the procedures and plans that will be initiated prior to, and during, the operational phase of the project.
- *Section 5 – Management Objectives*
A full list of management objectives identified at this stage, by topic heading. Under each topic, the issues and management strategies for those management objectives are identified.

Section 2

Vision and Objectives

2.1 Vision

Milford Dart's vision for the operation phase is:

To deliver a world class visitor experience to one of the country's pristine and precious tourist destinations which honours the country's environmental and conservation values.

This vision recognises the location of the project in the *Te Wāhipounamu - South West New Zealand World Heritage Area*. This is one of only approximately 400 special natural and cultural sites recognised globally by UNESCO (United Nations Educational, Scientific and Cultural Organization). Fiordland and Mount Aspiring National Parks are included in the World Heritage Area for their outstanding natural features, superlative landscapes, and for containing large areas of limited human influence.

The intended outcomes of this vision are an operation which:

- spreads visitor flow to avoid congestion and a feeling of overcrowding in Milford Sound / Piopiotahi
- reflects the New Zealand Tourism Strategy and DoC objectives with respect to a first class visitor experience within a National Park setting
- retains and enhances those natural values in areas affected by operation activities associated with the Dart Passage
- acknowledges Tangata Whenua and their role as kaitiaki
- is open and engaged with local communities and statutory authorities
- is safe for users, Park visitors, and operations personnel.

Milford Dart will strive to achieve the above outcomes through this OEMP, and through the conditions of any statutory approvals.

2.2 OEMP Objectives

The objectives of this OEMP are to identify:

- The key environmental issues and National Park values potentially affected by operation activities.
- The management objectives relating to those issues.
- Management strategies to avoid, remedy and mitigate adverse effects on National Park values through the operation phase, to the extent that the vision can be achieved.

2.3 Management Strategies

These are detailed on an issue by issue basis in Section 5 of this report.

Section 3

Operation Activities

3.1 Overview

The Milford Dart proposition is to provide new infrastructure to connect Queenstown and Milford Sound with a shorter journey that, in line with National Park Management Plan objectives¹:

- ensures continued growth is provided for while, at the same time,
- enhances the place of Milford Sound / Piopiotahi, and the journey to it,

as world-class visitor experiences within their Fiordland and Mt Aspiring National Park settings.

Relative to the current journey the Dart Passage tunnel infrastructure will enable a journey that:

- is 60% shorter – 120km not 300km each way
- requires about 55% less travel time – 2 hours not 4.75 hours driving each way
- delivers the practicality of earlier arrivals at and latter departures from Milford Sound – an arrival and departure window for visitors leaving from Queenstown of up to 11 hours rather than 2 hours.
- because of the shorter distance, requires the use of 60% less energy and consequently results in 60% less carbon emissions due to the reduced distance traveled alone.
- Provides the visitor with more time in their Milford Sound / Piopiotahi day for other experience choices that may be available at stops along the journey, at Milford Sound or back in Queenstown.

Milford Dart will be an infrastructure business and will adopt an “open access” business model. Open access in this context means open to all operators who meet Milford Dart’s Dart Passage operational, safety, sustainability and quality requirements, including those for interpretation and driver training.

Milford Dart will work in open co-operation with operators, communities, DoC, Transit NZ and other relevant stakeholders to develop the Milford Dart journey as a value proposition that is attractive to domestic and international visitors who are environmentally focused and meets their expectations on environmental sustainability.

This will include a goal of ensuring conservation values are enhanced. A further aim will be growth of the Milford Sound visitor coach market segment and its journey variants including both the Dart Passage Return journey, the Te Anau Loop journey and other variants and services that may be instigated by particular operators.

Milford Dart proposes tunnel charges that reflect the core benefit of the journey; namely 60% less distance. There will be a per passage charge that relates to the value of the shorter journey and does not prejudice the visitor choice of a loop trip via Te Anau.

In consultation with the DoC and Operators, Milford Dart may use a differential tunnel charging regime to encourage visitor arrivals and departures across the whole 7.5 hour to 11 hour (peak summer months) Milford Sound arrival and departure window available with the Milford Dart journey.

Differential pricing could also be used as a mechanism to encourage a more even seasonal spread of visitors, thus improving asset utilisation, and therefore the yield and financial sustainability of the tourism sector in the whole region².

¹ Fiordland National Park Management Plan; June 2007 p196

² Draft New Zealand Tourism Strategy 2015 (NZTS2015); May 2007.

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Operation Activities

Further details of the operations are being progressed through the business model being prepared for the Milford Dart.

3.2 The Journey

The 120 km Milford Dart Journey from Queenstown to Milford Sound / Piopiotahi will take 2 hours driving at an average speed of just over 60km/hr.

The Milford Dart journey travels first along the shore of Lake Wakatipu to Glenorchy about 45km east of Queenstown. After leaving Glenorchy the route crosses the Rees and Dart Rivers. The Dart River Bridge marks the halfway point on the journey just over 60km from Queenstown.

Immediately after the Dart River crossing the route turns north up the Dart Valley to the entrance of Mt Aspiring National Park and turns east into the Routeburn Valley. The Dart Passage Routeburn portal will be about 500m beyond the current road.

Exiting from 10.4km Dart Passage into Fiordland National Park the route continues 10km up the Hollyford Valley past Gunn's Camp to meet the Milford Road (SH94). The last 30km of the journey follows the Milford Road and passes through the Homer Tunnel before descending down the Cleddau Valley to Milford Sound / Piopiotahi.

The Te Anau Loop will be a coach service providing a full circuit between Queenstown, Milford Sound / Piopiotahi, Te Anau and back to Queenstown. This service would utilise the Milford Dart Tunnel in either direction, and could include an overnight stop in Te Anau.

3.3 The Vehicles

The design concept of the Milford Dart and the tunnel has until recently been based upon the use of diesel/electric hybrid coaches with particular design features, coupled with a tunnel design oriented to complement the coach design in order to provide a high level of safety for the passengers. The main power source of the coaches is not, however, fixed at this stage. Alternatives to the diesel/electric hybrid option are being considered, including diesel power and other new technologies are being explored.

The particular design features of the coaches are listed out within the Management Strategies in this OEMP, as part of the strict control that Milford Dart must have over the design, specifications and operation of the all vehicles that use the tunnel facility.

The permitted use of "non-conforming" vehicles within the tunnel i.e. those that meet the minimum, but not necessarily all of, the requirements of the Milford Dart coaches, is being considered and will be developed further during the design of the tunnel facility. The Management Strategies that relate to vehicle specification will therefore be updated as necessary to meet the ultimate design requirements of the tunnel.

3.4 Tunnel and Associated Facilities

The tunnel and associated facilities will continue to be managed by Milford Dart once the construction phase is complete.

At this stage, the following operating philosophies have been identified as required in order to ensure that the facility operates within all health, safety, welfare and environmental requirements:

- Coach operation outside of the tunnel facility
- Control of coaches at portals and within the tunnel
- Security at tunnel portals
- Fire life safety and tunnel / coach evacuation

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Operation Activities

- Retrieval of stranded coach from tunnel
- Staff facilities operation, including waste management
- Ongoing pest management
- Ongoing rehabilitation / remediation

Some of the principles of the operation philosophies, and particularly the fire life safety concept, are included within the Management Strategies.

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Section 4

Operation Planning

4.1 Operation Plans

The operators of the tunnel facility will be required to prepare and submit detailed Operation Plans prior to commencement of the operation phase. These plans shall take account of all matters identified in this OEMP, and will include the following items.

4.1.1 Operation Philosophies

The detailed philosophies for the operation of all aspects of the facility will be drawn up by the Operator, and agreed by all stakeholders.

4.1.2 Environmental Impact Register

An Environmental Impact Register will be produced and maintained. This would register potential impacts under the various topic areas covered in Section 5 of this report.

4.1.3 Risk Assessments and Risk Register

All activities to be undertaken as part of the operation of the facility will be subject to an environmental risk assessment. Risk assessments will be undertaken by trained staff following an approved procedure which will:

- Identify the significant environmental impacts to be anticipated;
- Assess the risks of these impacts;
- Identify the control measures to be taken and reassess the risk; and
- Report where an inappropriate level of residual risk is identified so that appropriate action can be taken.

The residual risks are only considered acceptable if:

- The severity of the outcomes is reduced to the lowest practical level;
- The number or risk exposures are minimised; and
- All reasonably practicable mitigation measures have been taken.

A risk register documenting the above will be produced and maintained.

4.2 Control of Operation Processes

4.2.1 Training, Awareness and Competence

It is very important that all operations staff:

- a) understand the importance and value of the National Park environment they are working in, and adopt behaviours consistent with this environment (including cultural awareness); and
- b) are committed to complying with all relevant statutory approvals and legislation; and
- c) comply with all health and safety procedures.

To this end, all operations staff will be required to go through comprehensive environmental awareness training prior to commencing work at the facility. Refresher training throughout the operation phase will be implemented as appropriate.

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Operation Planning

4.2.2 Site Environmental Officer

The Operator will appoint a Site Environmental Officer (SEO), who shall be responsible for implementing and administering the OEMP, and monitoring environmental quality standards. The SEO shall have the authority to direct the operations to comply with the OEMP, and shall be directly responsible to the Operator.

The SEO shall be appropriately experienced in the type of work and trained in environmental management, and shall ideally not hold a line control management position directly supervising operation work.

4.2.3 Inspections

Inspections will be carried out by the SEO (and others as appropriate) of operational areas of the facility to verify that operations and supporting controls are being implemented effectively. The frequency of the inspections will be decided based upon the relevant activity, but is expected to be typically every three months once the facility is fully operational. More frequent inspections may be carried out during the initial stages of operation.

4.2.4 Monitoring and Reporting

A standardised system of regular monitoring of the management strategies is to be developed and conducted.

Baseline monitoring is to commence before the facility becomes operational, and before any future change in operating procedure.

The results of the monitoring program will be used to measure the effectiveness of the management strategies against the target.

A standardised reporting format will be developed by Milford Dart in agreement with the relevant stakeholders of the facility.

4.2.5 Non-Conformance

Milford Dart will document any identified non-conformances in a Non-Conformance Report. This report would identify the nature of the problem, the proposed corrective action, action taken to prevent recurrence of the problem, and verification that the agreed actions have been carried out.

Section 5

Issues and Management

5.1 Overview

The following topics are discussed in this section:

- Section 5.2 – Vehicles and Tunnel Safety
- Section 5.3 – Passenger Experience
- Section 5.4 – Security
- Section 5.5 – Maintenance Operations
- Section 5.6 – Vegetation and Habitat
- Section 5.7 – Biosecurity
- Section 5.8 – Earthworks
- Section 5.9 – Water Quality and Quantity
- Section 5.10 – Air Quality
- Section 5.11 – Noise
- Section 5.12 – Hazardous Substances
- Section 5.13 – Roads and Traffic
- Section 5.14 – Buildings, Structures and Signage
- Section 5.15 – Refuse and Waste
- Section 5.16 – Monitoring and Reporting

Other sections will be added as necessary to cover risk items as they are identified and management strategies are developed.

5.2 Vehicles and Tunnel Safety

5.2.1 Management Objective

- a) To ensure all users of the Dart Passage and all operations staff are safe at all times.

5.2.2 Issues

Design of the Dart Passage will require that it can only be used by specialised and approved vehicles, i.e. it is not a 'general purpose' facility available to any user. The operators of the tunnel will need to maintain control over the type and number of vehicles using the tunnel in order to ensure the safety of passengers and operations staff.

5.2.3 Management Strategies

- 1) Only approved vehicles will use the Dart Passage. Personal vehicles (including cars and campervans), motorbikes, bicycles, and pedestrians will not be permitted in the Dart Passage.
- 2) For situations where multiple vehicles are in the tunnel, approved vehicles will contain the following specialist attributes:

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Issues and Management

- A specialist communications system for co-ordination between coaches and the tunnel control system
 - Self-steering in the tunnel in both forward and reverse directions
 - Low combustibility construction that will minimise the contribution of the coach materials as a cause of fire and as fuel for fire
 - Fire suppression systems that would attack a fire in the unlikely event of it occurring.
- 3) Subject to (1), and provided there being no other vehicles in the tunnel at any one time, a vehicle not meeting the requirements of Clause (2) above may use the tunnel, provided the following attributes are met:
- A specialist communications system for co-ordination between coaches and the tunnel control system
 - Self-steering in the tunnel in a forward direction
- 4) Drivers will be required to undergo training in the following areas:
- Milford Dart's operational and fire/life/safety procedures
 - Communications interface with tunnel control and other vehicles
 - Normal passenger comfort and safety.
- 5) The Facilities Staff will control the use of the Dart Passage by coaches at all times. Any failure to comply with the directions of the Facilities Staff shall be reported immediately to the Manager of Milford Dart. The Manager will keep a written record of any reported failures and the corrective action taken.
- 6) The Facilities staff will have an automatic communications and tracking system that enables them to know the speed and direction of each coach and to let them communicate with each driver in a continuous basis.
- 7) The Dart Passage emergency ventilation system will operate automatically upon detection of fire on any vehicle while in transit within the tunnel.
- 8) Coaches shall will be equipped with "grab bags" containing warm blankets, torches, radios etc. for use if passengers are required to disembark from the coach.
- 9) An emergency rescue vehicle will be based at each tunnel Portal at all times. These vehicle will be capable of entering the tunnel to retrieve passengers that have disembarked from a stranded coach, under the direction of the coach driver / guide. The rescue vehicle will have a heated, smoke-free cabin capable of holding all occupants of a Milford Dart coach (typically 48 number) for transport to the portal, or away from the site if required.
- 10) A maintenance vehicle will be based at the Routeburn Portal and will be able to undertake emergency towing if required.
- 11) Both rescue vehicles will carry emergency and medical equipment.
- 12) Emergency and medical equipment will be provided and maintained at both portals.
- 13) Health and Safety signboards will be erected at both portals advising of all necessary emergency service and response contact numbers and procedures.
- 14) An emergency plan will be developed and implemented. It will also be communicated to all local emergency services. It shall include personnel training requirements and trial evacuations. Duties for all staff will be laid out in terms of various potential emergencies including but not limited to, tunnel fires, earthquakes, tunnel collapse, rock fall at portals, serious accidents or fatality in the tunnel, fuel

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leaks. The emergency plan will be displayed on safety bulletin boards at each Portal and carried on all vehicles entering the Dart Passage.

5.3 Passenger Experience

5.3.1 Management Objective

- a) To provide passengers with a world-class visitors experience.

5.3.2 Issues

In line with Milford Dart's vision, passengers on board any Milford Dart service should expect a world-class journey to one of the country's pristine and precious tourist destinations. Passengers will be informed of the environmental and conservation values of the areas they pass through.

5.3.3 Management Strategies

- 1) With respect to coaches and their design, operators meeting the following criteria will be favoured :
 - Luxury coaches carrying up to 50 passengers
 - Designed to allow for experience of scenic vistas
 - Designed to include on-board information and entertainment systems, particularly with respect to proving interpretation presentations.
- 2) Coach drivers will be trained and required to provide a minimum level of interpretation to visitors in relation to the National Parks environments they pass through, including:
 - Explanations of the landscape formation, its geology, vegetation cover and ecology, including the transitions that occur
 - Tangata Whenua's long association with the areas and the spiritual and cultural values they still hold
 - An outline of the history (including Maori and European exploration) of the National Parks, including DoC's rule
 - National Parks' conservation values, issues and objectives
 - An outline of the construction history of the Milford and Hollyford Roads, the Homer Tunnel and Dart Passage.

5.4 Security

5.4.1 Management Objective

To provide all means of security possible to ensure the safe transit of passengers through the tunnel, as well as ensure safe and secure work environments for all facility and operations staff.

5.4.2 Issues

The correct implementation of security procedures at the tunnel is paramount to success in this area.

5.4.3 Management Strategies

- 1) Facilities will be kept secure at all times. Only authorised individuals will be permitted entry to the facilities.

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- 2) The Facilities Staff will control the security gates at each end of the Dart Passage. The gates will be closed at all times except when coaches arrive from either side. The gates will open automatically to allow coaches through but will not be able to be operated by unauthorised people.
- 3) Each portal will be monitored by 24 hour video surveillance cameras linked to security alarms. During operational hours, the Facilities Staff will monitor the activity at each portal to ensure no unauthorised access is attempted. Out-of-hours cover will be provided by movement sensors linked to telemetry to warn of unauthorised access by vehicles, pedestrians, or animals.
- 4) The ventilation gate will automatically shut when the emergency ventilation fans start.

5.5 Maintenance Operations

5.5.1 Management Objective

- a) To ensure the continued safe operation of the tunnel and associated facilities.

5.5.2 Issues

The provision of maintaining the tunnel and the portal facilities in full working order is important to success in this area.

5.5.3 Management Strategies

- 1) All operational and emergency systems and plant will be maintained in good working order by qualified staff at all times.
- 2) Inspections of the tunnel carriageway by Facilities Staff will occur before the first transit of the day, and after the last transit of the day. The Facilities Staff are expected to be resident in Glenorchy, and would use the tunnel to get to and from the facilities room at Hollyford Portal.
- 3) Maintenance of the Dart Passage will normally occur before 7.00 am and after 10.00 pm in the summer (September – April) and 7.00pm in the Winter (May – August).
- 4) A planned program/schedule for the maintenance of plant and equipment will be established and maintained.
- 5) Maintenance of the operational equipment at the portals will be scheduled to be outside of normal tunnel operating hours where practical, or if not practical, it will be timed to cause the minimum of disruption or visual impact to the visitors.
- 6) The facilities staff will be responsible for inspecting the Dart Passage and Access Roads and reporting/actioning any non-compliance with their Inspection Manual. They will inspect the Dart Passage and access roads each day before the commencement of operations, and after completion of operations.
- 7) An annual condition inspection of the tunnel and associated facilities will be carried out by suitably qualified experts and a written report provided to the satisfaction of the Southland and Otago Conservators.

5.6 Vegetation and Habitat

5.6.1 Management Objective

- a) To minimise and manage impacts on vegetation and habitat during the operational phase of the tunnel facility. This extends to the environment in the immediate vicinity of the tunnel portals, and to the National Park areas through which the coaches pass when using the tunnel facility.

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Issues and Management

5.6.2 Issues

The operation of the tunnel may have an impact on vegetation within the surrounding National Parks. Sources of these effects are the increased traffic volumes on the approach roads to the tunnel and the maintenance activities at the tunnel. In addition, impacts on vegetation created in the construction phase require on-going attention in the operation phase.

5.6.3 Management Strategies

- 1) The portal surrounds will be reinstated with indigenous vegetation upon completion of construction of the tunnel and portals, in agreement with DOC.
- 2) Landscaping and vegetation will be maintained as part of the maintenance of the facility to ensure that replanting is successful and the environment of the portals returns to its natural state as soon as possible.
- 3) The programme of rehabilitation (as per CEMP) for the Hollyford Airstrip area and other areas affected by construction (and not required by operations) will be maintained.

5.7 Biosecurity

- a) To prevent the further introduction of pest species into the National Parks.
- b) To eradicate any pest plants currently present in the areas affected by construction.

5.7.1 Issues

Under the National Parks Act 1980, introduced species in National Parks are to be, as far as possible, eradicated. This is because introduced species can have undesirable effects on indigenous species and threaten the natural values inherent in the National Parks.

Without mitigation, importation of pest plants into the National Park can occur through several means, including on vehicles, machinery, materials and people. To some extent this may already occur with visitor/tourist activities. Clearance of vegetation associated with construction activities can also provide opportunities for pest plants to expand their current territory.

Didymosphenia geminata is one such pest plant present in areas immediately outside the National Parks and whose entry to the Parks must be avoided.

5.7.2 Management Strategies

- 1) Any materials required for maintenance and imported into the National Parks will be checked to minimise the potential for weed and exotic plant species to enter the National Parks. This check will be undertaken by an independent inspector, and an inspection certificate issued. For bulk materials that are imported and used, containment or sterilisation will be used to ensure that weed seeds cannot enter the material or are killed prior to entry to the National Parks.
- 2) Inspections will be undertaken in and around the areas of operation on a routine basis to assess weed growth and weeding/spraying carried out to kill weeds. This approach will ensure that any weeds which have inadvertently entered the area, and germinated, will be rapidly killed, minimising the potential for weeds to become established in the area.
- 3) As per the CEMP, in consultation with DoC, the existing predator control and monitoring programme in the Routeburn Valley area will be extended to cover all of the beech forest areas below 600m in the vicinity of the Routeburn Road. Funding for this programme would continue for the life of the project.

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Issues and Management

5.8 Earthworks

5.8.1 Management Objective

- a) To maintain the on-going programme of rehabilitation of exposed soil upon completion of the construction phase;

5.8.2 Issues

Rock and soil plays a critical role in the ecological functioning of the National Parks, and contributes to the distinctive landforms of the National parks and their natural, scenic and amenity qualities.

At the end of the construction phase all exposed soil surfaces will be rehabilitated, principally through vegetation, in accordance with the CEMP. There will be an ongoing commitment to ensuring the rehabilitation programme is successful. This will ensure impacts on the Parks with respect to soil erosion and dust continue to be mitigated.

5.8.3 Management Strategies

- 1) Maintain rehabilitation programme commenced at the end of the construction phase (refer CEMP).
- 2) Maintain all sediment control works, including perimeter drains and any silt traps and settlement ponds, until soils are adequately protected from erosion.

5.9 Water Quality and Quantity

5.9.1 Management Objective

- a) To have no measurable impact on surface water bodies beyond a reasonable mixing zone, from any discharges resulting from operations activities, and any residual discharges from the construction phase.

5.9.2 Issues

High quality water gives life to flora and fauna in the National Parks, and its largely pristine and unmodified nature has significant amenity value to Park users and visitors. Impacts on water must be mitigated to the extent that impacts are minor.

5.9.3 Management Strategies

- 1) All waste water from toilets, showers, and hand basins will be collected in storage tanks. These tanks will be sized based on maximum predicted workforce numbers. Effluent will be removed periodically from the sites by tanker and disposed off at an appropriate facility outside the National Parks.
- 2) Tunnel water will be discharged to Hollyford River / Whakatipu Ka Tuka after passing through a settling tank and treatment system to remove sediments and any traces of oil.
- 3) The chemical composition of the tunnel water will be periodically tested to ensure no acid leachate is discharged.
- 4) The flow rate of water discharge from the tunnel shall be measured and recorded.

Section 5

Issues and Management

5.10 Air Quality

5.10.1 Management Objective

- a) To minimise and manage the environmental impacts from atmospheric emissions during the operational phase of the tunnel facility. This extends to passengers using the service, operational staff at the facility, visitors to the National Parks in the vicinity of the facility, and landowners within the area of the facility.

5.10.2 Issues

Atmospheric emissions from anticipated activities at the portals, and on the approaches to the portals, include dust generation, odours, particulates, and emissions of harmful gases. Sources of these are operation of the coaches, maintenance vehicles and standby power generators.

5.10.3 Management Strategies

- 1) Vehicle emissions will be kept to a minimum at the portals and on the approach roads by avoidance of unnecessary engine running and idling time when using diesel power source.
- 2) Emissions from the diesel-powered standby power generation plant will be minimised by avoidance of unnecessary running time, except for times of power outages and agreed load-test run times.
- 3) Access roads will be sealed and vehicle speeds on any unsealed roads will be restricted to minimise dust generation.

5.11 Noise

5.11.1 Management Objective

To minimise and manage the environmental impacts from noise during the operational phase of the tunnel facility. This extends to passengers using the service, operational staff at the facility, visitors to the National Parks in the vicinity of the facility, and landowners within the area of the facility.

5.11.2 Issues

There is potential for noise impacts to persons at the Milford Dart site. Sources of these are operation of the coaches, maintenance vehicles, standby power generators, power transmission units and ventilation fans.

5.11.3 Management Strategies

- 1) Noise from vehicles will be kept to a minimum at the portals and on the approach roads by avoidance of unnecessary engine running and idling time when using diesel power source.
- 2) Noise from the diesel-powered standby power generation plant will be minimised by avoidance of unnecessary running time, except for times of power outages and agreed load-test run times.
- 3) Noise emissions from diesel-powered standby power generation plant, ventilation plant, and electrical transmission plant will be minimised through suitable design of the equipment, strategic location of the equipment at the facility, and the use of noise attenuation facilities.
- 4) Access roads will be sealed and vehicle speeds restricted through areas of particular concern to minimise noise generation.

Section 5

Issues and Management

5.12 Hazardous Substances

5.12.1 Management Objective

- a) To avoid the entry of hazardous substances into the environment from operations activities.
- b) To ensure hazardous substances are stored in a secure manner.
- c) In the event of an accidental spillage, remediation of that spillage is to be undertaken immediately.

5.12.2 Issues

Entry of hazardous substances into the environment can have significant impacts on ecological values and must be avoided.

There is the potential for accidental release of hazardous or toxic material into the environment associated with the operation and maintenance activities of the tunnel.

Secure storage of hazardous substances on the site to achieve the above will be necessary.

5.12.3 Management Strategies

- 1) All coaches and rescue vehicles will be refuelled outside the National Parks.
- 2) All measures necessary will be taken to prevent the spillage of hazardous substances during any transport, transfer and storage in the National Parks. Any spillage that does occur will be remediated immediately.
- 3) Maintenance facilities at the portals will be appropriately constructed so that the potential for contamination is minimised as appropriate to the scale of the facility. Drainage of carriageways and maintenance areas will be to ground via suitable secure oil/water separation units.
- 4) Any bulk fuel/oil/chemical storage areas will have secondary containment systems that will be:
 - Impervious and non-reactive.
 - Able to contain the volume of the full vessel plus a freeboard of 0.5m to allow for the possible collection of rainwater at the same time as a spill
 - Covered to prevent collection of rainwater.
- 5) All fuel/oil/chemical dispensing units will have drip trays and drip containers in place at all times.
- 6) Any storage of dangerous or hazardous materials will comply with the relevant regulations or transitional regulations under the *Hazardous Substances and New Organisms Act, 1996*.
- 7) The maintenance depot at the Hollyford Portal will be secure after hours.
- 8) No oils or other substances other than stormwater are to be discharged to ground.
- 9) A general spill containment kit will be readily available at all times at both portals. The kit is to contain sawdust, gloves, an absorbent boom and a container for the disposal of contaminated equipment and material.
- 10) No dispersants will be used to control spills of hydrocarbons.
- 11) Any accidental spills shall be remediated immediately.

Section 5

Issues and Management

5.13 Roads and Traffic

5.13.1 Management Objective

- a) To minimise and manage the impacts on traffic, and the impact of traffic on the environment, during the operational phase of the tunnel facility. This extends to the environment in the immediate vicinity of the tunnel portals, and to the National Park areas through which the coaches pass when using the tunnel facility.

5.13.2 Issues

The purpose of the tunnel is to provide a route for tourists through the National Parks. Consequently, there will be an increase in traffic volumes through the area. The operation of the tunnel will seek to minimise the effects of this on the environment.

5.13.3 Management Strategies

- 1) Coaches will not enter the Mount Aspiring National Park earlier than 7.00 am and shall leave the Park by 10.00 pm in the summer (September – April) and 7.00 pm in the Winter (May – August).
- 2) The Drivers of Milford Dart Coaches and any other operator using the Dart Passage will hold;
 - All relevant qualifications under the transport legislation;
 - An annual certificate confirming their knowledge of the Operations Plan; and
 - A current first aid certificate.
- 3) Each coach will have an Environmental Management Plan, a Health and Safety Plan and an Emergency Plan and any necessary equipment. The driver will be fully trained in the implementation of these plans. A copy of the plan and each driver's (and any guides) annual certificate will be provided to the Department as part of its compliance.
- 4) Coaches will not exceed 80 km/h in the Dart Passage.
- 5) Coaches will comply with stipulated road speeds during transit through the National Parks.
- 6) The Drivers will comply with all transport safety legislation at all times.
- 7) The Drivers will be required to be courteous and respectful of other road users at all times.
- 8) Emergency training will include any emergencies that may arise when driving on any of the roads that may be included in the services described below. Particular focus will be on winter driving including use of chains, avalanche awareness and procedures and access to the Homer Tunnel.
- 9) Facilities Staff will maintain close liaison with Transit New Zealand and District Council staff as to road conditions and will ensure information is promptly relayed to drivers.

5.14 Buildings, Structures and Signage

5.14.1 Management Objective

- a) To minimise the visual impact of permanent buildings, structures, and signage on the scenic qualities of the National Parks.

5.14.2 Issues

The relative lack of human influence in National Parks is what contributes to their natural and scenic values. Buildings, structures and signage in National Parks have the potential to detract from these values.

Section 5

Issues and Management

All operations buildings and facilities need to be designed and landscape to be sympathetic to the National Park landscape and other values.

5.14.3 Management Strategies

- 1) All buildings and fixed structures will be painted in accordance with colour schemes approved by DoC and the resource consent authorities.
- 2) All buildings will be of a single storey construction unless otherwise approved by DoC and the territorial authorities.
- 3) All permanent buildings (e.g. portal structures) will be landscaped as soon as practicable following the completion of construction.
- 4) No advertising will be erected within the National Parks.
- 5) Roading warning signs will comply with Transit and resource consent authority requirements.
- 6) Signs will be located where they are easily noticed but with minimum visual impact.

5.15 Refuse and Waste

5.15.1 Management Objectives

- a) To minimise refuse and waste production;
- b) To contain all refuse and waste within the construction area boundaries; and
- c) To remove all refuse and waste from the National Park which has the potential to adversely affect National Park values.

5.15.2 Issues

The presence of refuse and waste in National Parks is incompatible with National Park values. .

5.15.3 Management Strategies

- 1) All rubbish (including that of passengers) will be collected and disposed of outside the National Parks.
- 2) Waste bins will be provided for the collection of domestic waste from the operations facilities, and maintenance waste such as oily rags etc. The contents of the waste bins will be regularly and appropriately disposed of outside of the National Park
- 3) All practicable steps will be taken to minimise production of and the unsightly collection and storage of refuse or waste on Site.

5.16 Monitoring and Reporting

5.16.1 Management Objective

- a) To monitor and record all those matters necessary to demonstrate compliance with statutory approvals.
- b) To maintain regular contact with regulatory authority representatives to review work performed on site, the management plans and effects on the environment.

Section 5

Issues and Management

5.16.2 Issues

The management, monitoring and reporting of impacts on the environment is a critical step in ensuring environmental targets are being achieved and all statutory approvals are being complied with.

5.16.3 Management Strategies

- 1) An annual report will be submitted to the regulatory authorities to demonstrate compliance on environmental aspects and any non-compliances (and related corrective actions) which have occurred.
- 2) Hold regular meetings on site with regulatory authority representatives to review environmental performance against the OEMP.

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