Otago Regional Council

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Section 42A Staff Recommending Report

Application RM24.184
OceanaGold (New Zealand) Limited

The recommendation in the staff report represents the opinion of the writer and it is not binding on the Hearing Commissioners. The report is evidence and will be considered along with any other evidence that the Hearing Commissioners will hear.

Shay McDonald
Senior Consents Planner

9 June 2025

Otago Regional Council

Executive Summary

OceanaGold (New Zealand) Limited has applied for resource consents under the Otago Regional Plans for Water, Waste, and Air, and the Resource Management (National Environmental Standards for Freshwater) Regulations 2020 to authorise the activities necessary for the Macraes Phase Four mine expansion at the Macraes Gold Project.

The application involves 34 new resource consents and Section 127 variations to 20 further resource consents. Land Use Consent is also sought from Dunedin City Council and Waitaki District Council. The application is bundled as a discretionary activity in respect of the Otago Regional Council consents, although the Applicant has requested that the applications to all three Councils be bundled, with an overall non-complying activity status. I have provided an assessment against s104D and consider that the application passes the s104D(1)(b) test and can therefore be considered under s104B.

After assessing the actual and potential effects of the proposed activities, considering submissions, and considering all of the matters in section 104 of the Resource Management Act 1991, my recommendation is that application be **declined.**

My reasons for this recommendation are discussed throughout this report. In summary:

- The proposal will result in significant adverse effects on surface water quality, aquatic ecology, terrestrial biodiversity, and cultural values and these effects cannot be adequately managed by consent conditions.
- In accordance with the effects management hierarchy prescribed in the NPS-IB certain activities must be avoided, and this affects all main project areas.
- The granting of consents for vegetation clearance and earthworks within natural inland wetlands in the Coronation Area and in the Innes Mills Area is precluded by regulation 45D(6) of the Resource Management (National Environmental Standards for Freshwater) Regulations 2020.
- Granting of consent is precluded by s107(1).
- The proposal is considered to be inconsistent with the NPS-FM, the NPS-IB, as well as the freshwater and indigenous biodiversity provisions of the ORPS 2019 and the P-ORPS 2021.
- The proposal is inconsistent with Part 2 of the Act.

Although my recommendation is to decline the application, I have attached a suite of recommended consent conditions that address some of the adverse effects; however, I do not consider that these conditions can adequately manage all of the effect of this proposal.

This report refers frequently to the RM24.184 s95 Notification Report dated 20 March 2025 and should be read in conjunction with that report. This report should also be read in conjunction with the s42A reports prepared by the Dunedin City Council and the Waitaki District Council.

Report Author

My name is Shay Maree McDonald, and I am a Senior Consents Planner at Otago Regional Council. I have three years' experience working in the resource management sector, with all of this time being at Otago Regional Council.

I hold the qualification of Bachelor of Science with Honours in Chemistry from the University of Otago. I am an Associate Member of the New Zealand Planning Institute and am certified as an RMA decision maker through the Making Good Decisions Programme (2023).

I have been processing Resource Consent Application RM24.184 since it was lodged on 3 April 2024. I was involved in pre-application work for this proposal since 2023, and I have processed all of the Stage 1 and Stage 2 MP4 applications, one of which remains in progress.

I have visited the site on ten occasions, the first occasion being in February 2023 and the most recent visit being November 2024.

Shay McDonald
Senior Consents Planner

Abbreviations

AEE	Assessment of environmental effects
AMD	Acid and metalliferous drainage
ANZG	Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018
AWBM	Australian Water Balance Model
BRWRS	Back Road Waste Rock Stack
CIA	Cultural Impact Assessment
CO5	Coronation Stage 5 pit
CO6	Coronation Stage 6 pit
DCC	Dunedin City Council
DoC	Department of Conservation
DGV	Default guideline value
DoC	Department of Conservation
ESCP	Erosion and Sediment Control Plan
FENZ	Fire and Emergency New Zealand
FMU	Freshwater Management Unit
FoS	Factor of Safety
FRBF	Frasers backfill
FRIM	Frasers-Innes Mills
FSWRS	Frasers South Waste Rock Stack
FTSF	Frasers Tailings Storage Facility
FWWRS	Frasers West Waste Rock Stack
GBWRS	Golden Bar waste rock stack
LMP	Lizard Management Plan
LOM	Life of mine
MALF	Mean annual low flow
MDE	Maximum Design Earthquake
MEEA	Murphys Ecological Enhancement Area
MGP	Macraes Gold Project
MP3	Macraes Phase Three
MP4	Macraes Phase Four
MWM	Mine Waste Management Limited
MWMS	Mine water management system
NBWR	North Branch Waikouaiti River
NES	National Environmental Standard
NGWRS	Northern Gully waste rock stack
NPS	National Policy Statement
NZDSG	New Zealand Dam Safety Guidelines
NZSOLD	New Zealand Society on Large Dams
OBE	Operating Basis Earthquake
OGL	OceanaGold (New Zealand) Limited
ORC	Otago Regional Council
ORPS 2019	Otago Regional Policy Statement 2019
PIC	Potential Impact Classification

p-ORPS 2021	Proposed Otago Regional Policy Statement 2021
RCS	Respirable Crystalline Silica
RFI	Request for Further Information
RPA	Regional Plan: Air for Otago
RPW	Regional Plan: Water for Otago
RPWaste	Regional Plan: Waste for Otago
RPA	Regional Plan: Air for Otago
RMA	Resource Management Act 1991
SEE	Safe Shutdown Earthquake
SQEP	Suitably Qualified and Experienced Person
TARP	Trigger Action Response Plan
TSF	Tailings Storage Facility
TSP	Total Suspended Particulate
TTTSF	Top Tipperary Tailings Storage Facility
WBM	Water Balance Model (Goldsim)
WDC	Waitaki District Council
WRS	Waste rock stack
ZOI	Zone of influence

Otago Regional Council

OTAGO REGIONAL COUNCIL
SECTION 42A REPORT

ID Ref:	**999859517-33364**
Application No(s):	**RM24.184**
Prepared For:	**Hearing Commissioners**
Prepared By:	**Shay McDonald – Senior Consents Planner**
Date:	**9 June 2025**
Subject:	**Section 42A Recommending Report – Application RM24.184 by OceanaGold (New Zealand) Limited for various consents relating to the Macraes Phase Four mine expansion.**

1. Purpose

This report has been prepared under Section 42A of the Resource Management Act 1991 (RMA) to assist in the hearing of the application for resource consents made by OceanaGold (New Zealand) Limited. Section 42A enables local authorities to require the preparation of a report on an application for resource consent and allows the consent authority to consider the report at any hearing. The purpose of the report is to assist the Hearing Commissioner in making a decision on the application.

The report assesses the application in accordance with Sections 104 and 104B and 104D of the RMA and makes a recommendation as to whether the application should be granted, and a recommendation on the duration of the consent and appropriate conditions.

This report contains the recommendations of the Senior Consents Planner and is not a decision on the application. The recommendations of the report are not binding on the Hearing Commissioners. The report is evidence and will be considered along with any other evidence that the Hearing Commissioners will hear.

2. Summary of the Application

2.1 Overview

Applicant: OceanaGold (New Zealand) Limited

Applicant's agent: Mitchell Daysh Limited

Site address or location: Macraes Gold Project, Golden Point Road, Macraes Flat.

Legal description: Refer Appendix A

Record of title number and owner: Refer Appendix A

Map reference approximate midpoint of key areas:

- Coronation North E1394751 N4978202
- Coronation E1395849 N4977657
- Frasers-Innes Mills E1400944 N4972375
- Golden Bar E1406749 N4968248

Consents sought:

Table 1 *List of Consents Sought*

Consent Number	Type	Description	Requested/Existing Consent Term
New Consents			
RM24.184.01	Discharge Permit	Discharge tailings into FTSF	1 Oct 2046
RM24.184.02	Water Permit	Take surface water from FTSF	1 Oct 2046
RM24.184.03	Water Permit	Dam water within FTSF	1 Oct 2046
RM24.184.04	Land Use Consent	Earthworks within 100 m of natural inland wetlands resulting in drainage	Unlimited
RM24.184.05	Land Use Consent	Vegetation clearance and earthworks in and around natural inland wetlands	Unlimited
RM24.184.06	Water Permit	Divert surface water around Coronation Pit	20 Oct 2048
RM24.184.07	Discharge Permit	Discharge waste rock into Coronation Pit	20 Oct 2048
RM24.184.08	Discharge Permit	Discharge waste rock onto Coronation WRS	20 Oct 2048
RM24.184.09	Water Permit	Take surface water from Coronation Pit for use in the MWMS prior to, during, and after mining.	20 Oct 2048
RM24.184.10	Water Permit	Take groundwater from in and around Coronation Pit for use in the MWMS prior to, during, and after mining.	20 Oct 2048
RM24.184.11	Discharge Permit	Discharge waste rock onto Coronation North and Trimbells WRS	2052 (approx. 27 years)
RM24.184.12	Discharge Permit	Discharge waste rock into Coronation North Pit	2052 (approx. 27 years)

RM24.184.13	Water Permit	Take surface water from Coronation North Pit for use in the MWMS prior to, during, and after mining.	2052 (approx. 27 years)
RM24.184.14	Water Permit	Take groundwater from in and around Coronation North Pit for use in the MWMS prior to, during, and after mining.	2052 (approx. 27 years)
RM24.184.15	Water Permit	Divert surface water around Golden Bar Pit	35 years
RM24.184.16	Water Permit	Take surface water from Golden Bar Pit for use in the MWMS	35 years
RM24.184.17	Water Permit	Take groundwater from in and around Golden Bar Pit for use in the MWMS	35 years
RM24.184.18	Discharge Permit	Discharge water from Golden Bar Pit into Golden Bar Creek	35 years
RM24.184.19	Land Use Consent	Vegetation clearance and earthworks within and adjacent to natural inland wetlands for the Golden Bar Pit extension	Unlimited term
RM24.184.20	Discharge Permit	Discharge waste rock into Golden Bar Pit	35 years
RM24.184.21	Water Permit	Take surface water (cease diversions) into Golden Bar Pit to form the Golden Bar Pit Lake	35 years
RM24.184.22	Water Permit	Take groundwater (passive seepage) into Golden Bar Pit to form the Golden Bar Pit Lake	35 years
RM24.184.23	Discharge Permit	Discharge waste rock to land to extend the Golden Bar WRS	35 years
RM24.184.24	Land Use Consent	Disturb and reclaim the bed of Clydesdale Creek, and vegetation clearance and earthworks within and adjacent to natural inland wetlands to extend the Golden Bar WRS	Unlimited term
RM24.184.25	Discharge Permit	Discharge silt and sediment to Clydesdale Silt Pond during construction of the Golden Bar WRS	35 years
RM24.184.26	Water Permit	Divert surface water around the Golden Bar WRS	35 years
RM24.184.27	Water Permit	Impound water within the Clydesdale Silt Pond	35 years
RM24.184.28	Discharge Permit	Discharge water and contaminants from the base and toe of the Golden Bar WRS to	35 years

		groundwater, surface water, and the Clydesdale Silt Pond	
RM24.184.29	Discharge Permit	Discharge water and contaminants from Clydesdale Silt Pond into Clydesdale Creek	35 years
RM24.184.30	Discharge Permit	Discharge contaminants to air for mining and post-mining rehabilitation at Golden Bar Pit, WRS, and associated haul roads	31 Aug 2032
RM24.184.31	Discharge Permit	Discharge waste rock to land to facilitate the Golden Bar Road realignment	1 Oct 2046
RM24.184.32	Discharge Permit	Discharge silt and sediment to water within the NGWRS silt pond to facilitate the NGWRS rehandle	1 Oct 2046
RM24.184.33	Water Permit	To take and use surface water from Murphys Silt Pond, Frasers West Silt Pond, Redbank Silt Pond, and Clydesdale Silt Pond for use in the MWMS	35 years
RM24.184.34	Water Permit	Temporary damming and diversion of an unnamed tributary of Murphys Creek to facilitate culvert construction at MEEA	10 years
Variations			
RM10.351.43.V3	Discharge Permit	Discharge water and contaminants to water within FRUG and open pits to create the Golden Point-Round Hill and Frasers-Innes Mills Pit lakes	1 Oct 2046
RM10.351.44.V3	Water Permit	Dam water in open pits for the purpose of creating the Golden Point - Round Hill Pit Lake and the Frasers - Innes Mills Pit Lake	1 Oct 2046
RM10.351.45.V2	Water Permit	Take groundwater (passive seepage) for the purpose of creating the Golden Point - Round Hill Lake and Frasers - Innes Mills Pit Lake	1 Oct 2046
RM10.351.46.V2	Water Permit	Take surface water (cease diversions) for the purpose of creating the Golden Point - Round Hill Lake and Frasers - Innes Mills Pit Lakes	1 Oct 2046
RM10.351.47.V3	Discharge Permit	Discharge water containing contaminants to land in open pits and FRUG for the purpose of disposal of water and the creation of lakes (the Golden Point - Round	1 Oct 2046

		Hill Pit Lake and the Frasers - Innes Mills Pit Lake)	
RM10.351.48.V3	Water Permit	To take surface water for the purpose of dewatering Frasers Pit, Innes Mills Pit, Southern Pit, Round Hill Pit and Golden Point Pit.	1 Oct 2046
RM10.351.49.V2	Discharge Permit	To discharge waste rock to land in Frasers Pit, Innes Mills Pit, Southern Pit, Round Hill Pit and Golden Point Pit for the purpose of disposing of waste rock.	1 Oct 2046
RM10.351.50.V2	Water Permit	To divert water around the open pits known as Frasers Pit, Innes Mills Pit, Southern Pit, Round Hill Pit and Golden Point Pit.	1 Oct 2046
RM10.351.51.V3	Water Permit	To take groundwater for the purpose of dewatering Frasers Pit, Innes Mills Pit, Southern Pit, Round Hill Pit and Golden Point Pit.	1 Oct 2046
RM10.351.52.V3	Discharge Permit	To discharge contaminants from mining operations and post mining rehabilitation to air for the purpose of undertaking mining operations.	31 August 2032
RM12.378.11	Water Permit	To take groundwater for the purpose of creating the Coronation Pit Lake.	20 October 2048
RM12.378.12	Water Permit	To take surface water for the purpose of creating the Coronation Pit Lake.	20 October 2048
RM12.378.14	Water Permit	To dam water in Coronation Pit for the purpose of creating the Coronation Pit Lake	20 October 2048
RM12.378.15	Discharge Permit	To discharge contaminants from mining operations and post mining rehabilitation to air for the purpose of undertaking mining operations	31 August 2032
RM16.138.15.V1	Water Permit	To divert water around Coronation North Pit and into unnamed tributaries of Māori Hen Creek, Trimbells Gully, Mare Burn and Coal Creek for the purpose of preventing surface water ingress and managing the surface water runoff	35 years from commencement

RM16.138.12.V1	Water Permit	To take surface water for the purpose of creating the Coronation North Pit Lake	35 years from commencement
RM16.138.14.V1	Water Permit	To take groundwater for the purpose of creating the Coronation North Pit Lake	35 years from commencement
RM16.138.17.V1	Water Permit	To dam water in Coronation North Pit for the purpose of creating the Coronation North Pit Lake	35 years from commencement
RM16.138.06.V1	Discharge Permit	To discharge water containing contaminants from Coronation North Pit Lake to unnamed tributaries of Maori Hen Creek, Trimbells Gully, Mare Burn and Coal Creek for the purpose of pit lake overflow	35 years from commencement
RM16.138.19.V1	Discharge Permit	To discharge contaminants from mining operations and post mining rehabilitation to air for the purpose of undertaking mining operations	31 August 2032

Purpose: Gold mining

Information requested: 24 July and 9 December 2024

Notification decision: The application was publicly notified on 22 March 2025.

Submissions: Eight

Site visit: I have visited the Macraes Mine on ten occasions for the purpose of understanding this MP4 proposal and other applications.

Key issues: It is considered that the key issues with this application are:

- Adverse effects on terrestrial biodiversity and wetlands and the inability to manage these
- Adverse cultural effects
- Adverse effects on surface water quality and aquatic ecology
- Cumulative effects
- Long-term effects and practicalities of managing them

Specialist advice:

The following technical experts were engaged by ORC to audit the application:

- **Colin Macdiarmid**, Geotechnical Team Leader at GeoSolve Limited – assessed all geotechnical and stability aspects of the application on behalf of ORC, DCC, and WDC.
- **Alexandra Badenhop**, Technical Director – Water and Environmental Management at e3 Scientific – assessed water modelling, and effects on groundwater.
- **Michael Greer**, Principal Scientist, Director at Torlesse Environmental Limited – assessed surface water quality and aquatic ecology.
- **Glenn Davis**, Managing Director at e3 Scientific – assessed terrestrial ecology matters on behalf of ORC, DCC, and WDC.

- **John Iseli**, Principal Air Quality Consultant at Specialist Environmental Services – assessed air quality matters.

All technical experts listed above have visited the site on at least one occasion for the specific purpose of understanding the site in the context of this MP4 proposal.

2.2 Description of Application

The proposed activities are thoroughly described in Section 7 of the RM24.184 s95 Notification Report (**s95 Report**) dated 20 March 2025 and in the application documents. This information is not revisited in this report on the instruction of Minute 1 from the Commissioners.

To the best of my knowledge, there have been no substantial changes made to the proposal since the application was notified.

2.3 Application Documents

Application as lodged

The application as lodged comprised an Assessment of Environmental Effects supported by a suite of technical assessments. These documents are listed below:

- Macraes Phase 4 Project Resource Consent Application and Assessment of Environmental Effects, prepared by Mitchell Daysh Limited, dated 28 March 2024, including Appendices 1-30
    - Appendix 1: Records of Title
    - Appendix 2: WSP – Frasers Tailings Storage Facility Feasibility Design Report
    - Appendix 3: Engineering Geology Limited – Frasers Tailings Storage Facility Feasibility Design Report – Peer Review
    - Appendix 4: Engineering Geology Limited - Golden Bar Waste Rock Stack Design Report
    - Appendix 5: Engineering Geology Limited - Trimbells Waste Rock Stack Closure Stability Assessment
    - Appendix 6: Pells Sullivan Meynink - Macraes Phase 4 Consenting – Project Element 4.3.2: Open Pit Extensions
    - Appendix 7: Pells Sullivan Meynink- Macraes Phase 4 Consenting – Project Element 4.3.2: Open Pit Stability Assessment for Frasers TSF
    - Appendix 8: Mine Waste Management Limited - Macraes Mine Phase 4.3 Environmental Geochemistry Assessment
    - Appendix 9: Strata Geoscience - Macraes Mine Phase 4.3 Environmental Geochemistry Assessment – Peer Review
    - Appendix 10: Engineering Geology Limited - Macraes Phase 4 Project - Erosion and Sediment Control Report
    - Appendix 11: GHD - Macraes Phase IV – Coronation – Surface and Groundwater Assessment
    - Appendix 12: GHD - Macraes Phase IV – Golden Bar – Surface and Groundwater Assessment
    - Appendix 13: GHD - Macraes Phase IV – Frasers TSF - Innes Mills – Golden Point and Cumulative Surface and Groundwater Assessment
    - Appendix 14: GHD - Golden Bar Dewatering Assessment
    - Appendix 15: Ahikā - Assessment of Effects on Vegetation & Avifauna

- Appendix 16: Ahikā - Macraes Phase 4 Project – Ecological Impact Management Plan
- Appendix 17: Bioresearches - Herpetofauna Survey & Assessment – Macraes MP4
- Appendix 18: Bioresearches - Lizard Management Plan – Macraes MP4 Projects
- Appendix 19: Bioresearches - Invertebrate Survey & Assessment – Macraes MP4
- Appendix 20: Greg Ryder Consulting - Macraes Phase Four – Coronation Mine Proposed Expansion – Effects on Surface Waters
- Appendix 21: Greg Ryder Consulting - Macraes Phase Four – Golden Bar Mine Proposed Expansion – Effects on Surface Waters
- Appendix 22: Greg Ryder Consulting - Macraes Phase 4 – Frasers TSF - Innes Mils Proposed Expansion – Aquatic Ecology Assessment
- Appendix 23: Origin Consultants - Archaeological and Heritage Assessment for OceanaGold MP4
- Appendix 24: Tim Kelly Transportation Planning Limited - Macraes Goldmine MP4 Proposal Transportation Assessment
- Appendix 25: Brown, Copeland & Co Limited - Assessment of the Economic Effects of OceanaGold's Proposed Macraes Phase 4, Stage 3 Project
- Appendix 26: TechNick - MP4 Project Stage 3 Blasting Vibration and Airblast Effects Assessment OGNZL Macraes New Zealand
- Appendix 27: WSP - Macraes Phase 4 Expansion: Stage 3 Landscape and Visual Assessment
- Appendix 28: Acoustic Engineering Services - OceanaGold Macraes Phase 4 Project Assessment of Environmental Noise Effects
- Appendix 29: Beca - Air Quality Technical Assessment – Life of Mine Extension MP4 Stage 3
- Appendix 30: Letter from Aukaha

Requests for further information

Discussions were held between ORC and the Applicant in relation to the proposal to vary resource consents under s127 rather than apply for new resource consents. The Applicant's final response, which was accepted by ORC, is detailed in:

- Letter, RE: RM24.184 section 127 variations, dated 3 October 2024, signed by Suzanne Watt – Manager Environment & Social Performance, Oceana Gold (New Zealand) Limited.

Two requests for further information were made. These are summarised as follows, noting that each response comprised a package of information, including new documents and updates to previous technical reports:

- Response to s92(1) request for further information, dated 15 October 2024.
- Response to s92(1) request for further information, dated 7 February 2025.

Following the above s92 process, the Applicant provided an updated AEE, and several revised technical assessments on 18 February 2025. Not all technical reports were updated, and all reports attached to the revised AEE should be read in conjunction with the s92 material.

The Applicant also provided three emails to the processing councils subsequent to the updated AEE provided on 18 February 2025 that are considered to be further information to the application:

- Email containing offset models informing the current version of the Ecological Impact Management Plan, dated 24 February 2025.
- Email containing NES-CS assessments of consent requirements for soil disturbance of HAIL sites, dated 5 March 2025.
- Email clarifying vegetation disturbance at Trimbells WRS seepage outlet, dated 12 March 2025.

2.4 Section 124 Timeframes

Where consents are being replaced, they were applied for more than six months prior to their expiry.

3. Notification and Submissions

3.1 Notification Decision

The Applicant requested that the application be publicly notified. Public notice was duly given on Saturday 22 March 2025.

3.2 Submissions Received

Submissions were received from the following persons:

Table 2: *Summary of Submissions*

Submitter	Submission Points	To be heard?
Dean Parata and Trevor Hay	**Opposes** the application. The submitters state that there is no statutory obligation for OGL to 'clean up'. Concerns are expressed about 'self-governance' and 'self-testing' of water samples by the Applicant. The submitters state that their Māori heritage has been 'desecrated' and that greenstone and food gathering should have been protected. Concerns are expressed about lack of mining inspectors, unreported arsenic levels, a stolen mining licence, 'wiping out' of lizard populations, change of topographical landscapes, breaches of the RMA and QEII covenants without sanctions, and damage/removal of wāhi tapu. Mr Parata states that he has been appointed by his tribe to safeguard customary rights.	Yes
Director-General of Conservation on behalf of the	**Neutral** with respect to the application. States that due to proposed consent conditions being unavailable at the time of the submission,	Yes

Department of Conservation (**DoC**)	and the absence of a key management plans, they are unable to determine if the combination of conditions and management plans will be able to adequately address effects on the environment. Notes that it is also unclear how the proposed management measures will integrate into the management of the whole MGP operation. State that the effects of the proposal can't be considered in isolation and that cumulative effects of MP4 and other authorised mining activities need to be considered, and there should be an absolute bottom line of not increasing the risk to any threatened species. Notes that additional approvals under the Wildlife Act 1953 will also be required. Seeks that appropriate and enforceable conditions are imposed, should consents be granted.	
Fire and Emergency New Zealand (**FENZ**)	**Neutral** with respect to the application. FENZ seek that any changes to roads that are made as part of the proposal ensure that roads/internal roads have a minimum carriageway width of 4m, a gradient not steeper than 1:6, and a curvature as outlined in the Designers' guide to firefighting operations – Emergency vehicle access (F5-02 GD) to ensure that emergency vehicle access is provided for. FENZ also seek that an appropriate source of firefighting water is available and that appropriate hardstands are provided. These requirements should be reflected in consent conditions.	Yes
The Otago Fish and Game Council (**F&G**).	**Neutral** with respect to the application. F&G state the application's main impact on sports fisheries will be through the discharge of contaminants and flow on ecological effects which may affect trout populations. F&G have concerns about a reliance on monitoring in the long term, uncertainty about mitigation measures, existing compliance limits, and difficulty managing incomprehensibly long rehabilitation timeframes. F&G seek that water quality compliance limits are imposed that are protective of aquatic health, that there is	No

	certainty regarding implementation of mitigation measures, a comprehensive financial mechanism is in place to ensure rehabilitation and mitigation measures are properly funded and implemented, that the precautionary principle is applied, and that the freshwater visions for the Taieri and Dunedin and Coast FMUs are achieved.	
Royal Forest and Bird Protection Society of New Zealand Incorporated (**Forest & Bird**)	**Opposes** the application on the basis that there will be significant adverse effects on indigenous vegetation, fauna habitat, wetlands, and freshwater ecosystems; that the application is inconsistent with the relevant statutory framework; there is significant uncertainty about the scale of effects; that the biodiversity compensation proposed for the threatened moth species is not appropriate; that the health and wellbeing of freshwater and freshwater ecosystems is not adequately prioritised; and that effects on highly mobile species are not sufficiently managed. Forest & Bird seek that the application is declined in full, but note that if the consents are granted there should be significant changes to effects management, mitigation, and compensation to account for the significant effects on indigenous species and habitats.	Yes
Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Moeraki, and Te Rūnaka o Ōtākou (**Kā Runaka**)	**Opposes** the application. Kā Rūnaka state that the application does not adequately address the magnitude, severity, and ongoing impact of the effects arising from the application, and that the conclusions reached do not take into account an assessment of the cultural impacts of the proposal that has been endorsed by Kā Rūnaka. Particular concerns about water quality effects including cumulative effects, provision for appropriate and meaningful management of long-term effects, uncertainty of ongoing and long-tem nature of effects, impacts on biodiversity and landscape values, visual amenity effects, cultural effects, land restoration requirements and certainty, economic effects on Kā Rūnaka, durability and sustainability of proposed offsets and	Yes

	mitigations, and inadequate mitigation of all effects.	
Neil Roy	**Supportive** of the application, subject to appropriate conditions being imposed. Mr Roy expresses concerns about ineffective land restoration, incorrect naming of places and roads, post-mining roads at Coronation, poor compliance with previous consent conditions, removal of wind/dust gauges, lighting issues at night time, rehabilitation of waste rock stacks and whether this will provide for the same quality grazing as before mining and provide for livestock as anticipated by previous conditions. Ovreall, Mr Roy supports the proposal but has concerns about compliance and suggest that a financial bond could cover the costs of rehabilitation and ongoing management in accordance with conditions.	Yes
Richard Geels	**Opposes** the application. Mr Geels raises concerns about noise, dust, water pollution, and light pollution. In particular, Mr Geels appears to oppose the storage of tailings in Frasers Pit due to the noise, dust, and light pollution affecting nearby private dwellings.	Yes

Out of scope matters raised by submitters

The following matters raised by submitters are not discussed further in this report as they are matters exclusively addressed by DCC and/or WDC.

- Noise
- Lighting
- Landscape effects
- Transportation and roading
- Fire prevention
- Heritage matters

4. Description of the Environment

A detailed description of the site and the receiving environment is provided in Section 6 of the s95 Report and in the application documents. This information is not revisited in this report on the instruction of Minute 1 from the Commissioners.

Several figures are reproduced from the s95 Report to aid the reading of this report.

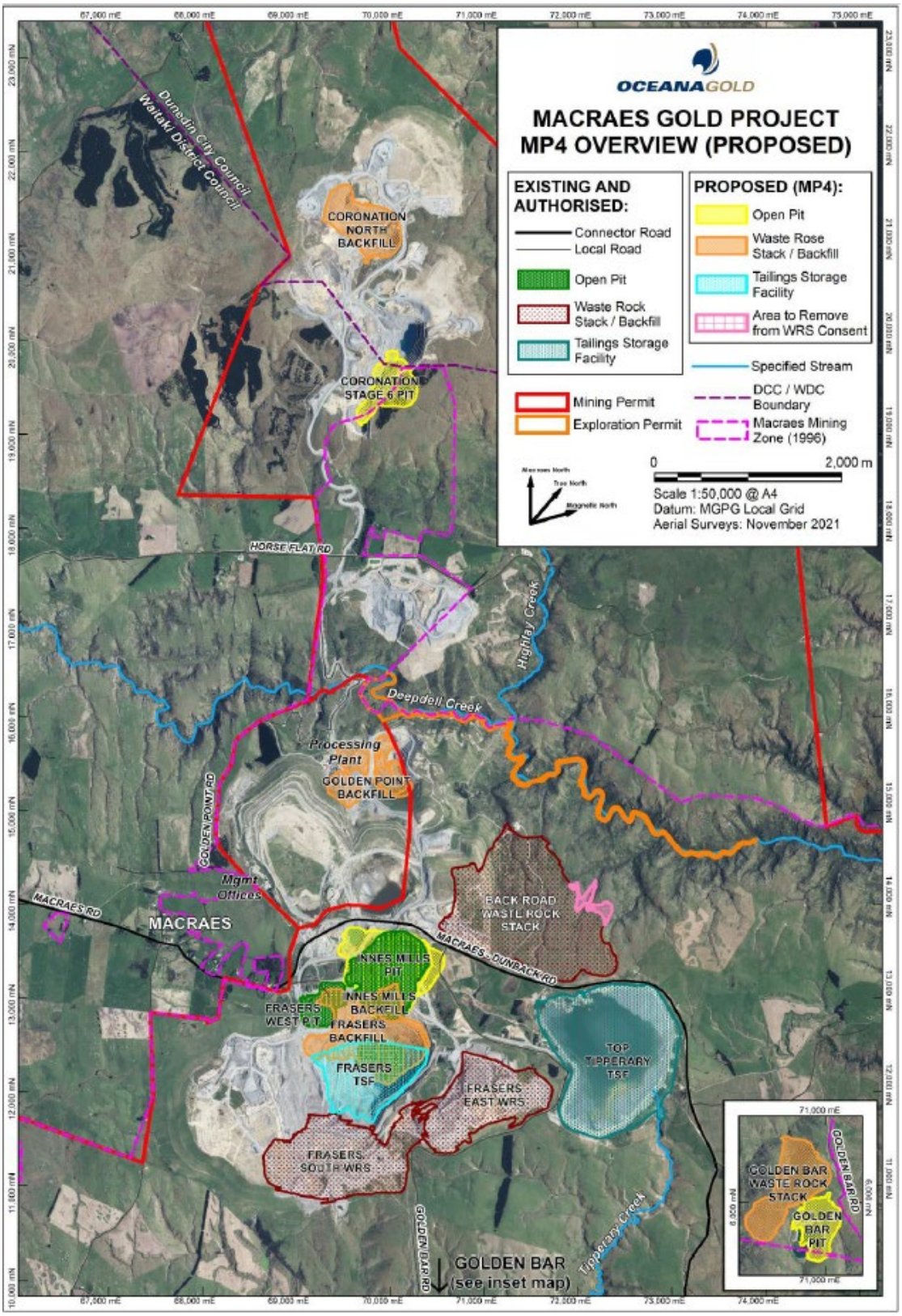

Figure 1 Site overview showing key mining features. Source: RM24.184 application.

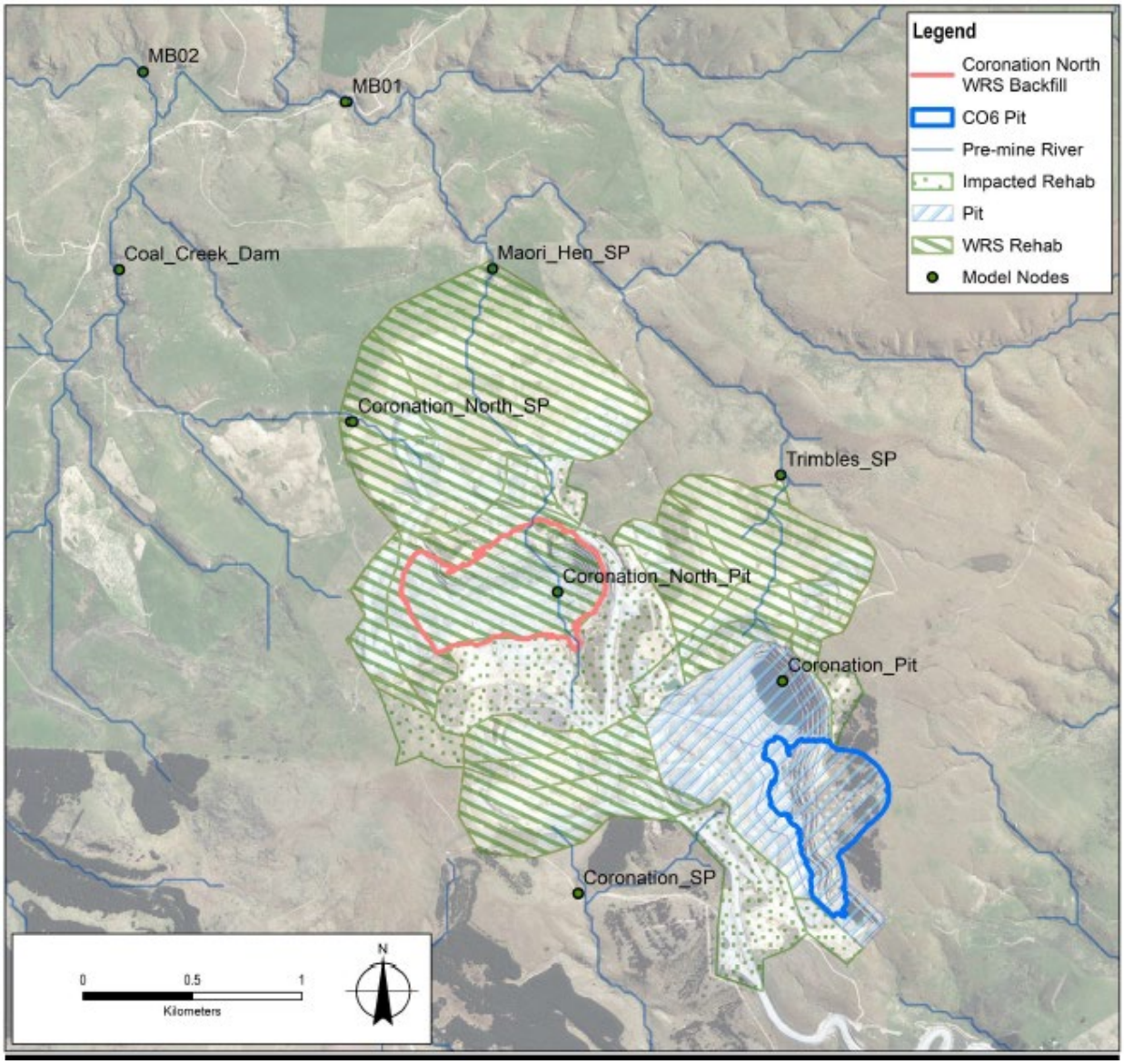

Figure 2 Monitoring locations of relevance to Coronation and Coronation North. Rivers shown as pre-mine rivers. Source: RM24.184 Appendix 11.

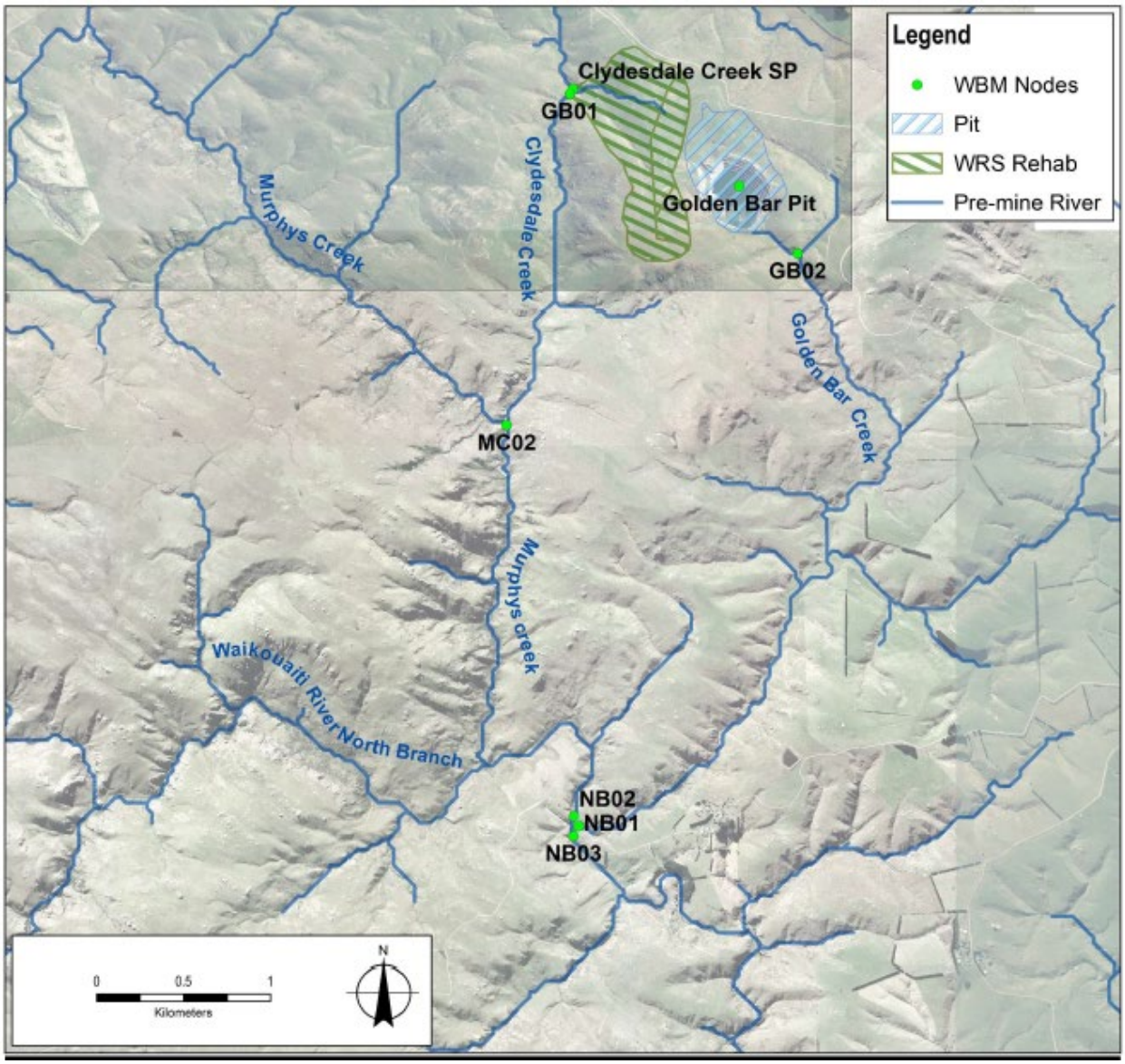

Figure 3 Monitoring locations relevant to Golden Bar. Rivers shown as pre-mine rivers. Source: RM24.184 Appendix 12.

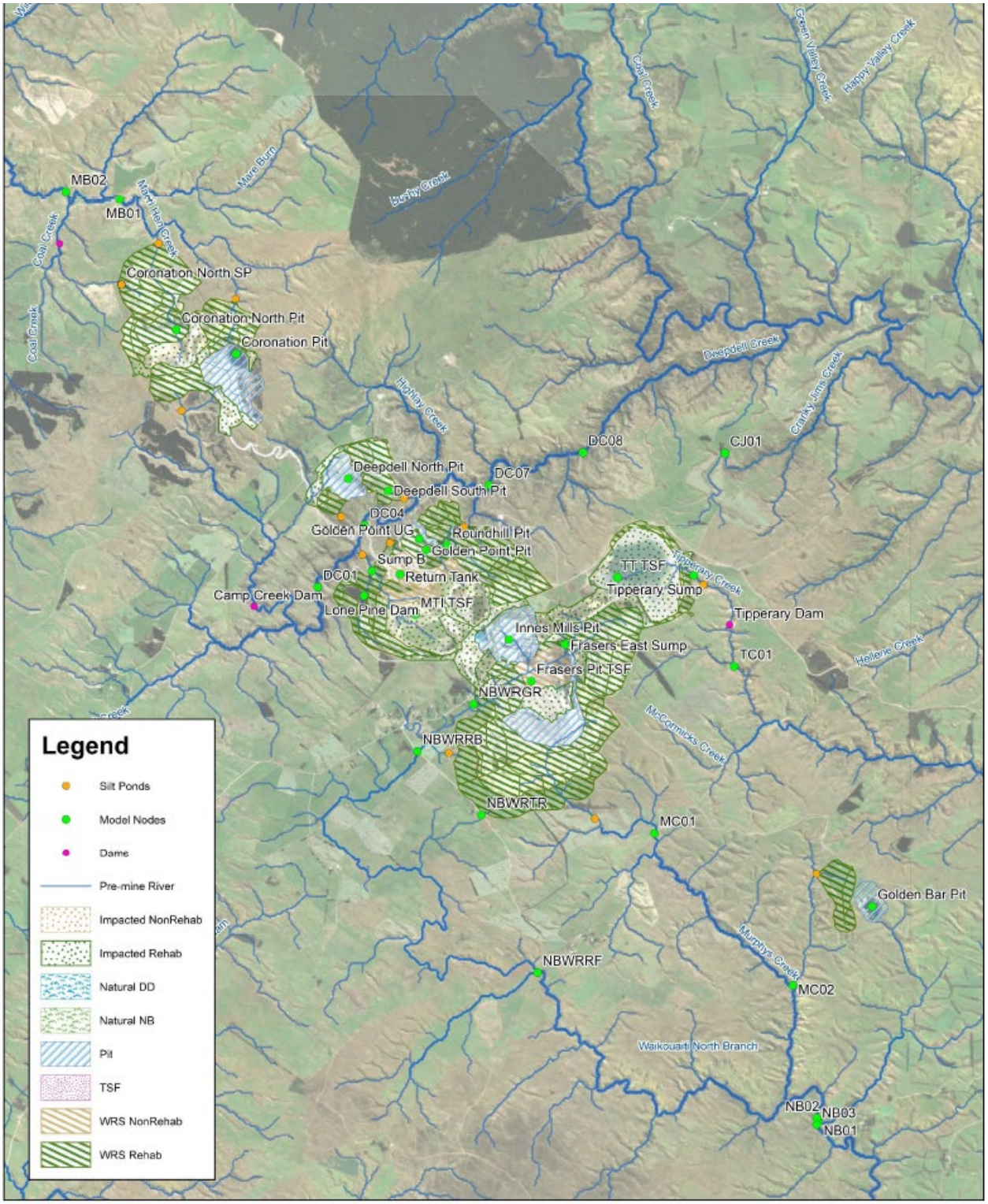

Figure 4 Central mining area and relevant monitoring locations. Rivers are shown as pre-mine rivers. Source: Appendix 13.

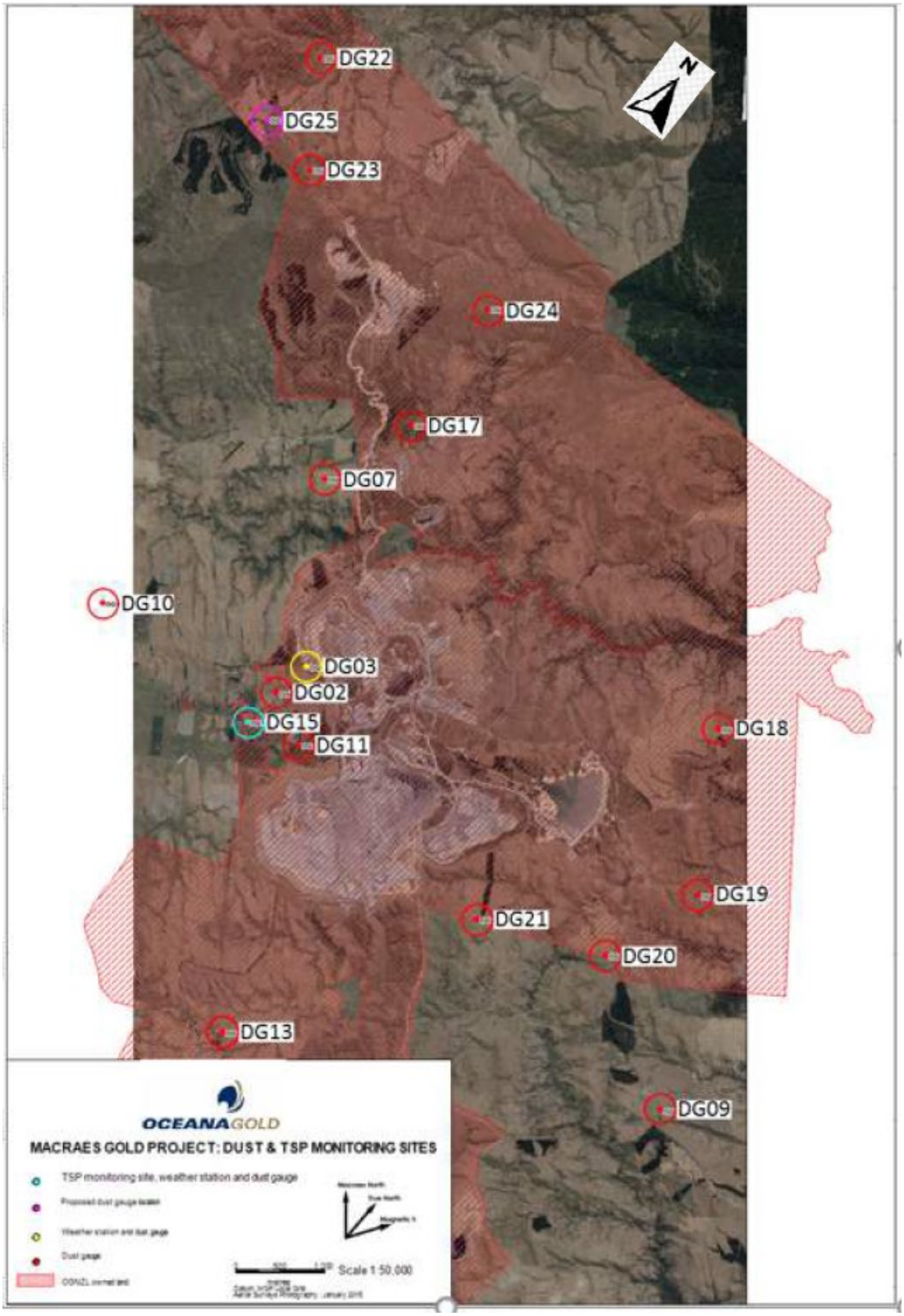

Figure 5 Air quality monitoring locations. Source: RM24.184 Appendix 29.

5. Status of the Application

Authorisation of the MP4 proposal would require 34 new resource consents under the following planning instruments:

- Regional Plan: Water for Otago (**RPW**)
- Regional Plan: Waste for Otago (**RPWaste**)
- Regional Plan: Air for Otago (**RPA**)
- Resource Management (National Environmental Standards for Freshwater Regulations) 2020 (**NES-F**)

The Applicant has further requested to vary the consent conditions of 20 existing resource consents under Section 127 of the Act.

The Applicant has described the relevant rules and regulations that apply to each activity in Table 4.2 and in sections 4.3.1 and 4.3.2 of the AEE. I agree that the Applicant has applied for all the relevant resource consents required to facilitate the MP4 proposal.

In respect of the resource consents required from ORC, the application is bundled as a ***discretionary*** activity. However, as explained in the s95 Report, the Applicant has requested that the bundling principle be applied to all consents in the proposal, including those required under the WDC and DCC District Plans. As a result, the application would have an overall non-complying activity status.

I am unaware of any reason that regional and territorial authority consents cannot be bundled for the purpose of making a substantive decision on the proposal and I note that the activities that would be authorised by regional consents cannot realistically be implemented in isolation of the territorial authority consents, and vice versa. Additionally, the Environment Court and High Court have approved such an approach to the bundling of consents.[1] However, to my knowledge this approach has not been taken for any previous rounds of consenting at this site.

As such, separate s42A reports have been prepared by Councils. Later in this report I provide an assessment against s104D to aid the commissioners if they are minded to apply the bundling principle across all consents in the proposal.

6. Section 104 Evaluation

Section 104 of the Act sets out the matters to be considered when assessing an application for a resource consent. These matters are subject to Part 2, the purpose and principles, which are set out in Sections 5 to 8 of the Act.

The remaining matters of Section 104 to be considered when assessing an application for a resource consent are:

(a) the actual and potential effects on the environment of allowing the activity;

[1] *Newbury Holdings Limited v Auckland Council* [2013] NZHC 1172 at [60]-[62]; *Tauranga Environmental Protection Society Inc v Tauranga City Council* [2021] NZHC 1201 at [35]; *Te Runanga o Ngati Awa v Bay of Plenty Regional Council* [2019] NZEnvC 196 at [223]; and *Hamilton v Far North District Council*, [2015] NZEnvC 12.

(ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity;
(b) any relevant provisions of a national environmental standard, other regulations, a New Zealand coastal policy statement, a national policy statement, a regional policy statement or proposed policy statement, a plan or proposed plan; and
(c) any other matter the Council considers relevant and reasonably necessary to determine the application.

6.1 S104(1)(a) – Actual and potential effects on the environment of allowing the activity

Section 104(1)(a) of the RMA requires the council to have regard to any actual and potential effects on the environment of allowing the activity. This includes both the positive and the adverse effects.

6.1.1 Positive Effects

The application states that the proposal will have significant regional and national economic benefits.

Appendix 25 of the application contains an assessment of the economic impacts of the proposal.[2] This is also summarised in Section 5.2 of the AEE. This report finds that since the mine commenced operations at Macraes in 1990, the MGP has been and continues to be a significant contributor to levels of employment, incomes and expenditure for northeast Otago, metropolitan Dunedin and the Otago Region. It is the opinion of Brown Copeland & Co that the granting of this MP4 proposal will:

- Maintain significant levels of local and regional employment, incomes and expenditure. For the northeast Otago sub-region the consents will result in the retention of 96 residents' jobs, $11.6 million per annum of income and $11.1 million per annum of expenditure with local businesses for an additional 5 years – from 2025 to 2029 (inclusive). For the Otago region the consents will lead to the retention of 354 residents' jobs, $42.6 million per annum of income and $32.6 million per annum of expenditure with local businesses for an additional 5 years.
- Maintain population levels in northeast Otago, thereby maintaining the quality of some central government services.
- Extend the period of time for the local economy to benefit from greater diversity and resilience;
- Extend the period of time the mine and its workforce will contribute to local community activities and socio-economic benefits.

Under existing consents, all open pit mining operations would cease around the end of 2026. Underground mining could continue at GPUG until around 2030; however, the ability to process ore beyond 2026 would be constrained by tailings storage facility (FTSF Stage 1 consented as part of CCP) reaching capacity. The MP4 Project will enhance gold production by providing for additional open pit mining and additional tailings storage at the FTSF until at least 2030.

[2] Appendix 25: Brown, Copeland & Co Limited - *Assessment of the Economic Effects of OceanaGold's Proposed Extensions To Its Open Pit Mining Operations At The Macraes Gold Project*, 9 February 2024

As a result of the MP4 Project, there will be an average of 64 additional local jobs created at the Macraes site over the life of the Project. In turn, resulting in wage and salary payments to these employees averaging $7.7 million per annum, and other expenditure in the local economy averaging $7.4 million per annum. For the wider Otago region, the MP4 Project will create and maintain an average of 177 jobs over the period 2025 to 2029. It is expected to pay wage and salary payments to these employees averaging $21.3 million per annum and other expenditure averaging $16.3 million per annum.

I have not sought any peer-review of these economic facts or predictions; however, I accept that the Macraes Mine has provided significant economic benefit to northeast Otago, metropolitan Dunedin, and the Otago region more broadly, as well as national economic benefit. The MP4 proposal will extend this contribution out until approximately 2030.

I agree that the proposal is likely to result in these positive effects.

6.1.2 Adverse Effects

A detailed assessment of adverse effects can be found in Section 9 of the s95 Report. This assessment is not repeated here. Rather, updates to the previous assessment, discussion of issues raised by submitters, and recommendations as to consent conditions are provided below utilising the same headers that were used in the s95 Report. The below sections rely on the expert evidence which is appended to this report as Appendices D-H.

6.1.2.1 General Matters

<u>The Permitted Baseline</u>

There are no changes to the permitted baseline assessment undertaken in section 9.1 of the s95 Report.

<u>Receiving Environment and the Existing Environment</u>

The receiving environment was described in the s95 Notification Report, and this earlier description is adopted.

<u>Draft Conditions</u>

A set of recommended consent conditions is attached as Appendix C. These are presented as recommended changes (tracked) to the Applicant's proposed consent conditions provided 30 April 2025. These are included to aid the Commissioners if they are minded to grant the applications, noting that my recommendation is that the application be declined. I do not consider that these conditions are adequate to manage the effects of the proposal.

6.1.2.2 Geotechnical Effects

The geotechnical aspects of the application were audited by Colin Macdiarmid of GeoSolve Limited. Expert evidence written by Mr Macdiarmid, provided after close of submissions and for the purpose of this hearing, is appended to this report at Appendix D.

<u>New information</u>

With the exception of a suite of volunteered consent conditions provided on 30 April 2025, no new information has been provided by the Applicant since the application was notified, nor was any information requested.

Actual and Potential Effects and Summary of Evidence

There are no changes to the assessment provided in the s95 Report. As set out in the evidence of Mr Macdiarmid, there are no areas of disagreement in relation to the potential adverse geotechnical effects.

In relation to the proposed open pit extensions, there is a risk of instability in all the pits post closure, and this risk extends beyond the pit crest. At Coronation North Pit, existing instability in the southwest wall will be managed by backfilling the pit following completion of mining. Mr Macdiarmid states that a minimum backfill level will be required, the details of which will be determined by additional geotechnical assessment following the completion of mining, if consents are granted. This condition would be on the combined WDC and DCC land use consent.

For all other pits, the instability risk is proposed to be mitigated through the creation of exclusion zones which will ensure the factor of safety (**FoS**) is at least 1.5 outside the exclusion zone. These zones are likely to range from 100-150 m beyond the pit crest, but the exact distance will be confirmed by geotechnical assessment following pit closure. Mr Macdiarmid considers this to be a reasonable approach from a geotechnical perspective but notes that the practicality of maintaining such zones in perpetuity should be considered by others. It may be appropriate, given the maintenance would be required in perpetuity, that a covenant in favour of the Consent Authority could be used to ensure these maintenance requirements are met. This is a matter to be considered by the DCC and WDC land use consent.

Mr Macdiarmid states that pit stability could be considerably improved by buttressing the pit walls with waste rock as is proposed for Coronation North, and that there is no technical reason that this could not be adopted for the other pits. I would note that the Applicant has applied for or already holds discharge permits which provide for backfilling of pits, and there is a condition applied to the WDC and DCC combined land use consent that requires OGL to use waste rock to backfill pits in order to minimise the size of waste rock stacks, where practicable. Nevertheless, it is my understanding that with the exception of Coronation North Pit, there is no significant backfilling proposed for any other pit. To a large extent I understand this to be a consequence of mine sequencing – waste rock has to be put somewhere during mining and there is not always a pit void within a suitable hauling distance available to receive it. However, it would be helpful if the Applicant could address this point in their evidence.

Where there are public roads within the proposed setback, Mr Macdiarmid considers that these should have a factor of safety of 1.5. These are matters that would be addressed on the combined WDC and DCC land use consent, if granted.

Mr Macdiarmid did not have any specific concerns about the stability of any waste rock stack but suggests a minor revision to conditions that requires that all waste rock stacks have a minimum factor of safety of 1.5 under static loading. I have included this recommendation on the relevant discharge permits.

The seepage and stability analyses of the FTSF are appropriate, the dam has been designed in accordance with best practice, and there are no credible failure modes. Overall, the geotechnical assessments carried out for this facility are considered appropriate and robust. Mr Macdiarmid notes that there is a risk that water stored within FTSF could be lost through the historic FRUG workings, and this this should be considered by groundwater experts. This is addressed later in this report and in recommended consent conditions.

Mr Macdiarmid has also reviewed the high-level erosion and sediment control assessment provided with the report. This report recommends that detailed Erosion and Sediment Control Plans (**ESCP**) are developed for MP4 construction works. Mr Macdiarmid is satisfied that the proposed consent conditions are adequate in terms of erosion and sediment control.

Overall, Mr Macdiarmid considers that the assessments provided by the Applicant are robust and any geotechnical effects can be mitigated.

Submissions

One submission was received which speaks to concerns about seismic resilience:

- Otago Fish and Game Council raised a concern about geotechnical stability and the potential consequences of dam failure. This concern was raised in the context of 'incomprehensibly long' timeframes for rehabilitation and the responsibility for undertaking rehabilitation and maintenance work over these timelines.

These concerns are shared by Mr Macdiarmid, who considers that the mitigations proposed by the Applicant to manage long-term instability are geotechnically reasonable, but the practicalities of maintaining such measures must be considered.

Recommended Consent Conditions

Mr Macdiarmid makes several recommendations in terms of pit, backfill, road, waste rock stack, and TSF stability. These generally require only minor modifications to the conditions proposed by the Applicant. I consider that the recommendations improve the consent conditions, through imposition of higher FoS, requiring the Consent Holder to use suitably qualified and experienced persons for any geotechnical assessments and include a peer review process, and also ensure that the conditions reflect the contents of the geotechnical assessments relied on by the Applicant in their application. These recommendations are captured in the suite of recommended consent conditions, attached as Appendix C or would be addressed on the combined DCC/WDC Land Use Consent.

Conclusions

There are no matters of disagreement about the geotechnical effects. Mr Macdiarmid has made several minor recommendations for improved effects management, and these changes have been incorporated into the suite of recommended conditions. There is a high-level concern about the practicalities of maintaining management measures beyond mine closure. Subject to the recommended consent conditions being adopted, I am satisfied that the adverse geotechnical effects of the proposal can be managed appropriately and are no more than minor.

6.1.2.3 Groundwater and Surface Water Modelling

The assessment in the s95 Report relied on the expert opinion of Alexandra Badenhop of e3 Scientific Limited (**e3**). Expert evidence written by Ms Badenhop, provided after close of submissions and for the purpose of this hearing, is appended to this report at Appendix E.

New Information

With the exception of a suite of volunteered consent conditions provided on 30 April 2025, no new information has been provided by the Applicant since the application was notified, nor was any information requested.

Actual and Potential Effects and Summary of Evidence

Groundwater and surface water effects have been assessed primarily by analytical and numerical modelling. The modelling accounts for the effects of existing mine features as well as the effects of activities for which all required consents are held where it is likely that these activities will be implemented within the MP4 timeframe. Modelling of surface and groundwater primarily accounts for the effects of seepages from waste rock stacks and tailings storage facilities to surface water and groundwater, as well as direct discharges of mine impacted water from silt ponds, seepage sumps, and pit lakes. Modelling does not account for the potential effects of erosion and sedimentation.

In paragraphs 5.1 to 5.12 of her evidence, Ms Badenhop outlines her understanding of the groundwater modelling and the way in which the outputs have been incorporated into the surface water models.

In paragraphs 6.1-6.7 Ms Badenhop outlines specific areas where she is in agreement with the assessment put forth by the Applicant and their consultants. I accept these agreed matters and do not focus on them in the remainder of this section.

Ms Badenhop lists matters of disagreement and matters of remaining uncertainty in relation to the modelling in paragraphs 7.1 to7.3 and 8.1 to 8.11, respectively. These matters are discussed below, with additional commentary where necessary to explain the relevance of the matters to the determination of this application.

Areas of disagreement:

1. The groundwater models assume that there is no existing plume of contaminants emanating from any of the mining features at the site i.e. that existing mine features have not resulted in any groundwater contamination beyond their immediate footprint. This assumption is not entirely supported by available monitoring data, some of which shows contaminant plumes have migrated further than would be expected in the timeframes of site operation. Ms Badenhop disagrees that this is an appropriate assumption to make and considers that this assumption is likely to result in an underestimation of contaminant migration in groundwater in the relative short-term (1-20 years).

2. Water balance modelling assumes that all contaminants discharging as seepage from WRS report to a silt pond, and hence the only pathway for contaminants in groundwater to discharge to surface water is via direct discharge from a silt pond. Ms Badenhop disagrees that this is

conservative, particularly in periods of low flows in surface waterbodies. While it is likely that a significant volume of WRS seepage will report to silt ponds, there remains a possibility that some seepage will migrate into groundwater resulting in diffuse discharges to surface waterbodies. Therefore, the potential effects on surface water quality may be underestimated.

3. The Deepdell Creek water balance model is stated to include the groundwater contaminant flux calculated by the groundwater model, specifically that associated with pit seepage. This should provide more conservative long-term predictions for the baseflow water quality in the streams; however, the short-term predictions are not considered conservative because the groundwater was modelled assuming no existing contamination.

Areas of uncertainty:

4. Groundwater models have assumed mine closure conditions, where all mine features are constructed to their full extent and site surfaces are rehabilitated and infiltration reduces to 29 mm/year. This does not reflect the existing state of the site and may result in an underestimation of contaminant concentrations in the short-term predictions (20 years). However, long-term predictions are less likely to be affected by this uncertainty.

5. The impact of climate change on groundwater modelling, particularly groundwater recharge rates, has not been assessed. This introduces a degree of uncertainty about the long-term migration of contaminants in groundwater. A climate change scenario has been incorporated into the surface water models.

6. The Coronation North Pit backfill has not been modelled as a contaminant source to its base. Furthermore, the consents, the subject of the application, allow for the formation of a pit lake within Coronation North Pit, but the modelling has assumed an above-ground WRS. This means that a shallow pit lake could form and spill into the Mare Burn catchment during the requested consent term. Additionally, the discharge of waste rock into Coronation Pit has not been included in the pit lake water quality model for this pit. This means that there are potential additional sources of contaminants that have not been incorporated in the modelling.

7. It is unclear if the groundwater models utilise the existing heights of the Coronation, Coronation North, and Trimbells WRSs, or the maximum heights as authorised by the existing consents, as the proposal to discharge additional waste rock to these WRSs was introduced after GHD modelling for this application was complete. The possible impact is that there are potential sources of contaminants that could increase the risk to groundwater and surface water that have not been incorporated into the models.

8. Modelling does not assess the potential cumulative baseflow reduction effects on the Mare Burn associated with the dewatering of the existing Coronation North Pit Lake, presumably because additional mining at Coronation North was not proposed at the time the GHD modelling was completed and waste rock was to be tipped into this pit without dewatering. Cumulative impacts may occur regardless of whether the Coronation and Coronation North Pit Lakes are dewatered concurrently or consecutively. The potential impact is an underestimation of the baseflow reduction to the Mare Burn, either in absolute magnitude or in duration.

9. The Applicant provided updated surface water modelling to specifically include the construction of the extended Back Road WRS (**BRWRS**) but did not update the groundwater model.

10. The discharge of waste rock into Golden Bar Pit was not included the pit lake water quality model. This is an additional source of contaminants, and its omission from the pit lake water model may result in an underestimation of the pit lake water quality.

11. Efficacy of passive and active treatment technologies is not yet known. Short-term feasibility testing may not be indicative of long-term performance.

12. There is uncertainty about the long-term management of seepage from tailings storage facilities. The draindown model, which estimates seepage from tailings facilities, assumes that seepage is captured and returned to Frasers Pit for a period of 20 years, and then managed alternately through active or passive treatments. However, the surface water model assumes that all seepage continues to be captured and doesn't report to the surface water receiving environment. The potential impact is an underestimation of contaminant inputs into the surface water receiving environment in the event that in perpetuity pumping back to opens pits doesn't occur and the passive/active treatment methods are not as effective at preventing contaminant discharge into the surface water receiving environment.

13. Sulphides have not previously been monitored at the site but could be an issue in anoxic groundwaters, which are a possibility at the site. I note that this question was raised by Ms Badenhop via the s92 process, but the possibility of anoxic groundwater conditions was disregarded by MWM without explanation.[3]

14. The location of DC08 used in the modelling assessment appears to be different to the current compliance monitoring location. Monitoring sites were provided to Council as part of the s92 process, and these data indicate that the DC08 monitoring location was moved in 2019. It appears that this was not incorporated into the GHD modelling. This will affect the catchment area reporting to the WBM model node and indicates that some of the mining activities such as the BRWRS may impact Deepdell Creek downstream of the DC08 compliance point.

Relevant Submissions

Several submitters raised concerns about groundwater or surface water quality, including concerns about the uncertainty in the modelled effects. To avoid repetition, these are all discussed in Sections 6.1.2.4 and 6.1.2.5 below.

Recommended Consent Conditions

Ms Badenhop recommends that groundwater and contaminant transport modelling should be updated in response to groundwater monitoring results. I agree and include this recommendation in the recommended suite of consent conditions. Consent conditions relating to management or monitoring

[3] Memorandum *Response to s92(1): Consents Application Number RM24.184 12 December 2024*, dated 4 February 2025

of adverse effects upon groundwater or surface water are discussed in Sections 6.1.2.4 and 6.1.2.5 below, and are included in the suite of recommended conditions attached as Appendix C.

I also recommend that the coordinates for DC08 are updated on any compliance monitoring schedule and that this is included in future modelling, but this change applies more broadly than just this consent application.

Conclusions

While the groundwater and surface water models are generally considered fit for purpose, there remain several areas where the models are likely to be less conservative than the application may suggest. As a result:

- Contaminant concentrations in groundwater and surface water may be underestimated and contaminant plumes may move more quickly that modelling would suggest.
- Baseflow reduction to streams may be underestimated, particularly in the Mare Burn as a result of any cumulative effects of dewatering Coronation Pit and Coronation North Pit Lakes.
- The contribution of contaminated groundwater to rivers via diffuse discharges may be underestimated, particularly in the short-term.
- The migration of contaminant plumes should be validated by groundwater monitoring.

Longer-term predictions are considered more conservative. The extent to which this uncertainty may change the predicted water quantity or quality outcomes cannot be quantified based on the currently available information. However, the below sections on groundwater and surface water effects should be read with this uncertainty in mind. It would be helpful if the Applicant could address the above matters in their evidence.

6.1.2.4 Effects on Groundwater

The groundwater aspects of the application were audited by Alexandra Badenhop of e3 Scientific Limited (**e3**). Expert evidence written by Ms Badenhop, provided after close of submissions and for the purpose of this hearing, is appended to this report at Appendix E.

New information

With the exception of a suite of volunteered consent conditions provided on 30 April 2025, no new information has been provided by the Applicant since the application was notified, nor was any information requested.

Actual and Potential Effects and Summary of Evidence

There have been no updates to the models therefore the modelled effects remain as indicated in the application and in the s95 report. These can be summarised as:

- Reduction in baseflows to streams associated with dewatering of pit lakes and during filling of pit lakes.
- Contamination of groundwater, characterised by contamination plumes which emanate from mining features such as open pits, WRS, and tailings storage facilities, ultimately discharging to rivers and streams.

It is evident that mining activities past, present, and proposed have and will continue to result in groundwater contamination that will persist for many hundreds of years. Once groundwater contamination has occurred there are limited remediation or mitigation options available to improve the groundwater quality or to prevent the eventual discharge of contaminated groundwater to streams as baseflow.

The evidence of Ms Badenhop sets out areas of disagreement and uncertainties in the groundwater modelling. The degree of uncertainty does not render the models or their predictions void but reinforces the importance of adequate groundwater monitoring to validate the actual effects that arise from the proposed activities. Appropriate surface water monitoring is also necessary to identify any unexpected sources of contamination in rivers that may result from contaminated groundwater recharging rivers.

While contamination of the groundwater resource is an adverse effect in its own right, there are no specific values attributed to the groundwater within the unmapped aquifers that underlie the Macraes site that would be affected by this contamination. The sensitivity of the groundwater receiving environment in this case stems from the potential interactions of people with groundwater and the connection of groundwater with surface water.

Effects on groundwater users are not anticipated based on the predictions of the groundwater models. This is because there are no known non-OGL bores located within the 400-year contaminant plume sourced from any of the three key mining areas, and because these plumes are not predicted to extend over non-OGL owned land. Monitoring of water quality in nearby wells has not shown any mining impacts to date. However, as set out in the evidence of Ms Badenhop, current groundwater monitoring near the Frasers West WRS suggests that models may be significantly underestimating the rate at which contaminant plumes are migrating away from mining features and so there is less certainty in this conclusion for bores near the Macraes Flat township. Thus, ongoing and targeted monitoring is required to validate the models and ensure that plumes do not begin to impact existing groundwater wells or extend over properties not owned by the Applicant, particularly in areas such as west of the Frasers WRS where the modelled plume could approach the boundary of Applicant-owned land. Siting of future private groundwater wells will also be informed by this monitoring.

The adverse effects of groundwater base flow reductions and the recharge of streams by contaminated groundwater are discussed in Section 6.1.2.5 below.

<u>Submissions</u>
Six submissions were received which directly or indirectly relate to groundwater effects or management. These are:

- Dean Parata and Trevor Hay express concerns about the Applicant conducting/monitoring their own water quality tests as well as alleged under-reporting of arsenic levels. No further detail was provided.

- DoC seek appropriate and enforceable conditions, robust monitoring and compliance, management plans that follow best practice, and coordinated management of effects from this MP4 proposal with the long-term overall mine development.

- Otago Fish and Game Council express concerns about the management of long-term and perpetual effects including the application of mitigation measures that are uncertain or require further resource consents. Further, the submitter seeks that water quality compliance limits are protective of aquatic ecosystems and sports fisheries, an appropriate financial mechanism guaranteeing rehabilitation programmes, application of the precautionary principle, and finally that any decision must support achievement of the freshwater visions for the relevant Freshwater Management Units (FMU) set out in the p-ORPS 2021.

- Forest and Bird express concerns about the level of uncertainty in the water quantity and quality effects assessment, inadequacy of the water monitoring currently committed to by the Applicant, as well as cumulative effects on the environment of this MP4 proposal and past, current, and future mining activities.

- Kā Rūnaka are concerned about water quality effects, appropriate and meaningful management of long-term effects, the uncertainty associated with the modelling and water quality assessments, and inadequate mitigation of effects.

- Richard Geels expresses concerns about water pollution and the proximity of mining activities to private dwellings.

The general theme of these submissions seems to be concerns about water quality and how effects will be monitored and managed in the short-term and long-term and coherently in conjunction with separately authorised mining activities. I am satisfied that the *nature* of the adverse effects on groundwater quantity and quality are understood from the modelling – the contribution of groundwater to rivers will be reduced and contaminated groundwater will emanate from mining features in plumes. The quantification of these effects is less certain and hence additional groundwater monitoring is recommended in accordance with the advice of experts to ensure that groundwater contamination is monitored and understood. I would welcome additional feedback from submitters to understand if these conditions alleviate their concerns.

Recommended Consent Conditions

The consent conditions volunteered by the Applicant propose a cascade of management plans to manage all water, including groundwater, at the site. The conditions requiring these plans set out in general terms what each plan should include. The wording appears to be taken from existing resource consents held by the Applicant and inserted into this suite of conditions without modification. Consequently, the proposed consent conditions do not contain the necessary details to ensure that adequate groundwater monitoring is undertaken, nor do they appear to reflect the recommendations of the Applicant's expert consultants. While it may be the intention of the Applicant for these recommendations to be included in management plans, I consider that the consent conditions themselves should specify the monitoring requirements as they are critical to ensuring that actual

adverse effects that manifest in groundwater are understood. Updates to existing management plans could then be made to reflect the conditions.

Section 12 of Ms Badenhop's evidence sets out her recommendations in relation to groundwater monitoring. These include the recommendations of GHD, as well as several additional recommendations.[4] I agree with all of these recommendations and have included them in the recommended suite of consent conditions attached as Appendix C. Helpfully, Ms Badenhop has produced several maps which include her recommendations as to appropriate locations for new monitoring wells. These are found at Appendix B to her evidence. I suggest that these are used as a starting point for a discussion with the Applicant and their expert consultants to finalise the groundwater monitoring programme for this round of consenting.

To the best of my knowledge, there is no reason that these monitoring recommendations cannot be implemented. Imposition of these new or modified conditions should not render OGL unable to comply with the conditions of any other consents they hold. Furthermore, the drilling of new groundwater monitoring wells at the locations recommended by Ms Badenhop would be permitted by RPW rule 14.2.1.1 as there are no C-series aquifers underlying the site. There is a second condition on Rule 14.2.1.1 which is that "the hole is filled or sealed on completion of work so that contaminants are prevented from entering the hole at any level". It is considered that the Applicant would be able to meet this condition. Thus, conditions requiring OGL to install new wells are not *ultra vires.*

Conclusions

The proposed MP4 activities, in conjunction with separately authorised mining activities, are expected to result in persistent groundwater contamination many hundreds of years into the future. This contamination is modelled to impact rivers in the Taieri, Shag, and Waikouaiti catchments. The predictions of the groundwater models should be validated via a robust monitoring programme to ensure that the effects that actually manifest in the environment are as expected and to ensure that measures can be implemented to protect groundwater users and surface water quality where it is possible to do so. Consent conditions are recommended to this effect.

Subject to the recommended consent conditions being adopted, I am satisfied that the adverse groundwater effects of the proposal can be managed and monitored appropriately. If the recommended consent conditions are not imposed, I would have less confidence that groundwater contamination would be adequately monitored.

However, further updates to my recommendation may be required if the Applicant provides updated technical information in response to the uncertainties identified in Section 6.1.2.3 and this alters the predicted groundwater outcomes.

6.1.2.5 Effects on Surface Water and Aquatic Ecology

[4] Application Appendices 11-14 and GHD memo attached to further s92 response 7 February 2025 as Annexure 2, answers to Q4.7.

The surface water and aquatic ecology aspects of the application were audited by Michael Greer of Torlesse Environmental Limited. Expert evidence written by Dr Greer for the purpose of this hearing is appended to this report as Appendix F.

The assessments of the effects on surface water and on aquatic ecology are combined in this section for ease of reading. Aquatic ecological effects are significantly influenced by water quality and combining these sections reflects this overlap and the combined evidence provided by Dr Greer.

In terms of the three key mining areas, the following summary is made:

- The activities in the Coronation and Coronation North areas will predominantly affect the Mare Burn catchment but will also affect the Deepdell Catchment via Coronation pit lake overflow into a tributary of Camp Creek.
- The activities in the Central Mining area will predominantly affect the Deepdell Catchment and Shag River/Waihemo Catchments but will also affect the NBWR catchment via Murphys Creek.
- The activities in the Golden Bar area will predominantly affect the NBWR catchment, with negligible effects on the Shag River/Waihemo Catchment.

New information

With the exception of a suite of volunteered consent conditions provided on 30 April 2025, no new information has been provided by the Applicant since the application was notified, nor was any information requested.

Actual and Potential Effects and Summary of Evidence

The information presented in the s95 report in relation to the predictions of models and the assumptions built into the model for each catchment remains unchanged. The evidence of Dr Greer notes one correction from his previous assessment where he stated that there was potential for more than minor copper toxicity effects at GB01 during the closure period and long-term phases. Dr Greer now clarifies that this was an error, and consideration of data provided through the s92 process suggest that copper concentrations will in fact be reduced during the mining phase of the Golden Bar Pit and will be maintained during and after closure.[5]

In the Application, the Applicant has drawn conclusions about the adverse effects on water quality and aquatic life, and consequently about the overall acceptability of the proposal in relation to those effects, based on the predictions of the models. As set out in the evidence of Dr Greer, he agrees with the Applicant that in general the modelling indicates that for all affected catchments, contaminant concentrations will increase compared with the current state, but these increases are likely to be sufficiently small that applicable thresholds for the onset of adverse effects on aquatic life should not be exceeded. Therefore, based on the modelling alone, adverse effects on water quality and aquatic ecology in the Mare Burn, Golden Bar Creek Clydesdale Creek, Murphys Creek, the NBWR, Deepdell Creek, and the Shag River/Waihemo are expected to be no more than minor.

[5] Note below paragraph 4.6 of Dr Greer's evidence

However, the Applicant does not propose to constrain effects to those predicted in the models; rather, the Applicant proposes to manage water quality such that it complies with existing compliance limits set for the relevant receiving waterbody in existing consents. These limits are set out in enduring existing consents held by the Applicant, including many not subject of this MP4 application.

In his evidence, Dr Greer notes that modelling does indicate that water quality in all catchments is likely to remain within the relevant existing compliance limits, provided the assumed mitigation measures are adopted and are as effective as modelled. In the absence of mitigation measures, it is possible that compliance levels may be exceeded at Deepdell Creek in low flow conditions and will be exceeded at locations in the NBWR. Dr Greer goes on to explain that these compliance limits allow for significant increases in contaminant concentrations, most of which are not necessary to facilitate current or proposed mining activities, and which would result in significant adverse effects on aquatic life if realised. As shown in Table 1 and Figure 1 of his evidence, the limits for dissolved arsenic, copper, zinc, and cyanide$_{WAD}$ far exceed the commonly used thresholds at which significant adverse effects on aquatic life arise.[6]

Importantly, despite proposing to manage water quality in accordance with existing limits, the Applicant has not assessed the water quality or aquatic ecology effects of water quality deteriorating such that these limits are approached. It is therefore not abundantly clear on what basis the Applicant considers the proposed management strategy appropriate or protective of water quality or ecological health.

The effect of this is that there are two scenarios to consider:

1. The ***likely effects*** based on the best available information. These are the effects as predicted by models, noting that these are subject to a degree of uncertainty.

2. The ***potential effects*** based on the Applicant's proposed management processes. These are the effects defined by the existing compliance standards.

I consider that the Applicant has been clear about what they are proposing to do. Throughout the application the Applicant has stated that water quality will be managed to comply with existing limits. This is reflected in the volunteered consent conditions put forth by the Applicant which reference or directly include Compliance and Monitoring Schedules that replicate the existing compliance standards for the relevant catchment. Further, these proposed conditions do not appear to require the implementation of many of the mitigation measures that have been recommended by their own consultants. These mitigation measures are critical assumptions of the water quality models and are required to ensure that the predictions of the models are reliable.

I acknowledge that some of these mitigation measures may require additional resource consents, and the efficacy of others is uncertain as they are still in the trial and feasibility testing stage. However, I cannot see evidence in conditions of any intention to trial or implement any of these measures, with

[6] Australian and New Zealand Guidelines for Fresh and Marine Water Quality 2018, Default Guideline Value (DGV) for the protection of 80% of species.

the exception of the structure to prevent advective oxygen flow through the Trimbells WRS. If it is the intention of the Applicant to defer all of this information to management plans, then I would expect to see an explicit requirement in the management plan conditions to acknowledge that these are new actions directly resulting from the MP4 proposal, rather than adopting existing wording applied to older consents. This has not been done.

Taking all of this into account, I consider that scenario 2 is the more likely scenario to eventuate, and thus there is potential for significant adverse effects on water quality and aquatic life in all catchments.

Potentially offering some level of protection is the narrative compliance standard that is included within each of the Compliance and Monitoring Schedules, which states:

"The waters of the [name of receiving water body], shall at all times be free of contaminants attributable to mineral processing and associated activities in concentrations which adversely affect directly or indirectly water uses or which adversely affect humans, animals, plants and/or aquatic life."

However, this is directly undermined by the numerical compliance standards directly beneath the narrative standard that provide for significant adverse effects. Inherent in this set up is the assumption that in remaining below the numerical limits the narrative standard would be achieved. This is clearly not the case.

I do not consider that this risk of significant adverse effects is acceptable. In an ideal world, I would address this risk by recommending conditions of consent that would require the Applicant to manage the MP4 activities such that water quality in all catchments complies with appropriate guideline levels protective of ecological health. In reality, any water quality effects attributable to MP4 activities will not be distinguishable (at the time of occurrence) from the effects of other authorised mining activities occurring within that catchment. I cannot recommend changes to a condition (or compliance schedule) that is part of a consent not subject of this MP4 application, and there is little practical value in imposing lower limits on these MP4 consents when there are other consents that will provide for higher concentrations of the same contaminants at the same monitoring location. Furthermore, some of the assumptions in the modelling rely on management of other mining features, for example future operation of silt ponds and rehabilitation of waste rock stacks to achieve specific seepage infiltration rates, that sit outside the scope of this application, meaning these actions cannot be assured through this consent process.

The situation is slightly different at Golden Bar, as all of the consents required to authorise the Golden Bar mining activities are sought as new consents. Further, in relation to monitoring locations GB02 and NB01 in Golden Bar Creek, there are no other resource consents that could affect water quality at these locations. I therefore recommend that for this catchment the numerical water quality limits for cyanide, dissolved metals, sulphates, and nitrate-nitrogen are lowered such that they are consistent with the predictions of the models (the best available information) with a small buffer to account for uncertainties in the models. Where possible, these limits should also comply with relevant guidelines protective of ecological health. Similarly, the compliance limits for MC02 in Murphys Creek should be lowered. I note that higher contaminant concentrations are provided for at MC01 which is also in Murphys Creek, upstream of MC02. The MC01 limits are not able to be changed, as these limits are also

applied other consents affecting this monitoring location that are not part of the MP4 application. However, I do not consider that lowering the limits at MC02 would frustrate these other consents, because there is additional 3.5 km of catchment dilution water to be taken into account at MC02, and modelling does predict that compliance with ecological guidelines can be achieved here.

I have recommended a number of changes to consent conditions which require the Applicant to implement the mitigation measures assumed in the modelling, to the extent that this is possible. There remain significant gaps where the mitigations or assumed management processes require modifications to consents not part of this application, and where I believe that additional consents would be required to implement those measures. These are discussed below.

Drinking water assessment

Dr Greer has compared the modelled surface water quality data and the existing compliance standards against the Water Services (Drinking Water Standards for New Zealand) Regulations 2022 which are the relevant drinking water regulations for New Zealand (and referred to in the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007). His assessment finds that in all catchments the existing and proposed compliance standards allow for dissolved arsenic concentrations to exceed the concentration set in the drinking water standards.[7] Furthermore, the Surface and Groundwater Assessments (modelled effects) do suggest that the drinking water standards will be exceeded on occasion (<5% of the time) in Deepdell Creek (currently, during mining and post-closure), and Golden Bar Creek (post-closure).

Given the Applicant has proposed to manage effects to comply with the existing compliance criteria, and these cannot be lowered for all affected waterbodies, I consider that the Applicant should investigate whether there are any existing downstream users of surface water in Deepdell Creek (prior to its confluence with Shag River/Waihemo), Golden Bar Creek (prior to its confluence with Waikouaiti River), NBWR and Waikouaiti River (upstream of NB03), and the Mare Burn (prior to its confluence with the Taieri River). While there are no current resource consents for the abstraction and use of surface water for domestic supply in these stretches of river, abstractions from these creeks for domestic use are provided for in the RPW as a permitted activity and are also provided for by s14(3)(b) of the RMA, so these can't be entirely discounted. If such users exist, OGL should provide immediate notice and an alternate potable water supply to these users in the event that monitoring demonstrates an exceedance of the drinking water standards that is attributable to mining activities. Conditions to this effect are included in the recommended consent conditions for relevant Golden Bar and Coronation North discharge permits, but I am not able to recommend these conditions for any activities at Coronation or Frasers-Innes Mills because there are no relevant discharge permits (discharges from pit lakes, silt ponds, or the base and toe of waste rock stocks) sought by this application on which to impose such a condition. Therefore, for Deepdell Creek and the NBWR the risk of arsenic levels in breach of drinking water standards is not mitigated by conditions of consent.

In the s95 Report I noted that the Stoneburn drinking water supply is sourced from the Waikouaiti River, downstream of the confluence of the NBWR and Murphys Creek, and also downstream of the confluence

[7] I note that at NB03 (Waikouaiti River) and at the compliance monitoring locations in the Shag River the arsenic limit aligns with the drinking water standard.

with Golden Bar Creek, in the vicinity of monitoring location NB03. This supply serves a population of 86 people. The compliance limits at NB03 are set below the drinking water standards for all relevant contaminants. Therefore, this supply should not be affected.

Effects of river reclamation

The GBWRS extension will result in the reclamation of 430 m of Clydesdale Creek, of which 95 m has a natural bed and 335 m has a modified bed. This river has limited ecological value. Nonetheless, given the activity cannot be avoided, and it is not possible to minimise or remedy the loss of river extent, the Applicant has proposed to undertake aquatic compensation to identify, protect, and enhance at least 860 m of stream of equivalent or better values. This is reflected in consent conditions proposed by the Applicant. Dr Greer considers that this commitment to doubling the length of stream designated for riparian enhancement and protection strengthens the assurance of a no more than minor net outcome for ecosystem health. It is my understanding that this area of stream will be located within the MEEA.

Submissions

Six submissions were received which spoke to concerns about surface water and aquatic ecology effects.

- Dean Parata and Trevor Hay express concerns about the Applicant conducting/monitoring their own water quality tests as well as alleged under-reporting of arsenic levels. No further detail was provided.

- DoC seek appropriate end enforceable conditions, robust monitoring and compliance, management plans that follow best practice, and coordinated management of effects from this MP4 proposal with the long-term overall mine development.

- Otago Fish and Game Council express concerns about the management of long-term and perpetual effects including the application of mitigation measures that are uncertain or require further resource consents. Further, the submitter seeks that water quality compliance limits are protective of aquatic ecosystems and sports fisheries, an appropriate financial mechanism guaranteeing rehabilitation programmes, application of the precautionary principle, and finally that any decision must support achievement of the freshwater visions for the relevant Freshwater Management Units (FMU) set out in the p-ORPS 2021.

- Forest and Bird express concerns about the level of uncertainty in the water quantity and quality effects assessment, the health and wellbeing of waterbodies and freshwater ecosystems, inadequacy of the water monitoring currently committed to by the Applicant, as well as cumulative effects on the environment of this MP4 proposal and past, current, and future mining activities.

- Kā Rūnaka are concerned about water quality effects, appropriate and meaningful management of long-term effects, the uncertainty associated with the modelling and water quality assessments, and inadequate mitigation of effects.

- Richard Geels expresses concerns about water pollution and the proximity of mining activities to private dwellings.

Consent Conditions

I recommend that the following consent conditions are imposed, if consent is granted, to ensure that effects on water quality and aquatic life are managed to the best possible extent, taking into account the constraints of the existing consented environment:

- Alter conditions referencing a Water Quality Management Plan to explicitly require monitoring data to be compiled and compared to historic data and relevant guidelines to understand trends and inform actions to minimise or remedy adverse effects. The currently proposed conditions simply require collection of data.
- A modification to proposed conditions requiring a preparation of a Pit Lake Compliance and Monitoring Schedule to require this plan be prepared to achieve specific objectives for protection of water quality, aquatic ecology, and mauri.
- Update of conditions requiring a Waste Rock Stack Management Plan or Water Quality Management Plan to specifically require these plans to account for the mitigation measures assumed by the water quality models or otherwise recommended by experts, to the extent possible given the limitations of the consents applied for. I have not been able to make these recommendations for activities in the central mining area.
- On consents enabling continued construction of waste rock stacks, a condition requiring the waste rock stacks be constructed in a manner that reduces active ingress of oxygen, such as limiting tip heights to 10 m, placing interburden waste rock in the core of WRS, progressive rehabilitation and capping, and construction of highly compacted, low permeability advective layers in front of basal rubble layers at the toe of WRS. The effectiveness of this is likely limited, as the Coronation, Coronation north, and Trimbells waste rock stacks are largely constructed already.
- On consents enabling continued construction of waste rock stacks, requiring these to be progressively rehabilitated to ensure infiltration reduces to a rate of approximately 29 mm/year to limit seepage.
- Installation of an in-line passive treatment system to capture and treat seepage water from the Golden Bar WRS to ensure sulphate loads reduce by at least 30% prior to discharge into the Clydesdale Silt Pond. Requirement for feasibility assessments and detailed design by a SQEP. Provide to Council for certification.
- Updates to the table in clause (b)(i) and the table in clause (b)(ii) of the Golden Bar Pit and Waste Rock Stack Compliance and Monitoring Schedule to specify lower numerical limits for cyanide, dissolved metals, sulphates, and nitrate-nitrogen. Specific levels to be determined by water quality and aquatic ecology experts following clarification of the uncertainties in the modelling raised in Section 6.1.2.3 of this report.
- Require the historic mine workings in the Golden Point Pit to be sealed prior to commencement of pit lake filling to prevent discharges of contaminants to Deepdell Creek via these workings, as was assumed in the water quality monitoring.
- Require the Frasers Underground mine workings to be sealed prior to first discharge of tailings into the FTSF, as was assumed in the water quality monitoring.

- Require the Golden Point Underground mine workings to be sealed prior to commencing pit lake filling in Golden Point Pit.
- Require OGL to notify and provide an alternative source of drinking water to any person who, at the time of granting these consents, relies on surface water for domestic drinking water, if their water supply becomes unsuitable for drinking as a result of mining activities. This can only be done for Golden Bar Creek and the Waikouaiti River, and for the discharge from the future Coronation North pit lake (should one form) because the relevant discharge permits in other catchments are not part of this application.
- Conditions on relevant water permits that are consistent with the Resource Management (Measuring and Reporting of Water Takes) Regulations 2010 and Amendment Regulations 2020.
- An emergency notification condition upon relevant discharge permits affecting the Waikouaiti River in accordance with Regulations 11 and 12 of the Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007.
- A change to the combined DCC and WDC Land Use Consent Condition 4.4(g) which currently states: "*Silt ponds must be removed and the site rehabilitated or be converted to stock water drinking ponds following completion of mining operations and rehabilitation.*" This is incompatible with the critical requirement to retain silt ponds and use them to capture and treat contaminants and to buffer contaminant releases to the environment, into the very long-term future and potentially in perpetuity. I understand that this amendment will be recommended by the DCC and WDC Reporting Officers.

To the best of my knowledge, these conditions would not frustrate any other consents held by the Applicant.

Consent conditions I have not recommended because they are likely to require additional resource consents or because they require changes to consents that aren't part of this application include:

- Section 107-type conditions on discharge permits as recommended by Dr Greer, because I am unsure that the Applicant could be able to demonstrate compliance with such a condition given the complex interaction of activities in the affected waterbodies.
- Changes to the Compliance and Monitoring Schedules applying to the Mare Burn, Deepdell Creek, or the NBWR because these schedules are not attached to any consents sought by this application.
- Except on the Golden Bar Pit and Waste Rock Stack Compliance and Monitoring Schedule, requiring periphyton targets be set to reduce the risk of periphyton blooms caused by increases in nitrate-nitrogen.
- Requirement to construct and utilise the Camp Creek dam as a source of dilution water to mitigate adverse effects in Deepdell Creek, because the relevant discharge permits (from pits, silt ponds, and waste rock stacks) are not part of this application.
- Rehabilitation requirements for other waste rock stacks to ensure infiltration reduces to a rate of approximately 29 mm/year to limit seepage, even though this infiltration rate was assumed in modelling and informs the cumulative effects assessment because these WRS aren't part of this application.

- Installation of in-line passive treatment system to capture and treat seepage water from the Frasers West and South WRS to ensure sulphate loads reduce by at least 30% prior to discharge into silt pond because these silt ponds aren't part of this application.
- Conversion of Frasers West Silt Pond, Clydesdale Silt Pond and Murphys Silt Ponds to sumps, because the timeline for such conversion is not specified in the technical reports and because any works may require disturbance to the bed of rivers, which requires additional resource consents.
- Construction of a new sump capturing seepage along the toe between the Frasers West and South WRSs at or near the monitoring location NBWRTR, as I understand that this will be located on the bed of a stream and would therefore require resource consent to construct (and additional consents to operate).
- Any requirement to manage the Frasers, Murphys, Maori Tommy, Battery Creek, Maori Hen, or Trimbells silt ponds in accordance with the assumptions of the models and in accordance with the statements in the application. This is because the conditions on the consents authorising the use of these silt ponds don't require replacement or amendment as part of this application.
- Drinking water notification and alternate potable supply conditions in Deepdell Creek or in the NBWR for any incidents that would render drinking water unsuitable, because the relevant discharge permits (discharges from silt ponds and waste rock stacks) are not part of this application.

Conclusions

Predictions of the water quality models indicate that adverse effects on surface water quality and aquatic ecology would be no more than minor. While there is a substantial degree of uncertainty in the modelling as a result of model inputs and assumptions, this remains the best available information to understand the likely adverse cumulative effects of the MP4 proposal and other consenting mining activities.

However, the Applicant has not provided any information to suggest that they intend to manage the MP4 activities, and other related mining activities, in the manner envisioned by the models. The various mitigation measures assumed by the models have not been put forth as volunteered consent conditions, and the Applicant has not proposed appropriate limits for contaminants in receiving waterbodies. Further, the Applicant states that water quality will be managed to ensure compliance with existing compliance limits. As shown in Figure 1 of Dr Greer's evidence, significant toxicity effects for some contaminants would arise even before the compliance limit for that contaminant was reached. As such, there is potential for significant adverse cumulative effects on aquatic life, and potential to render surface water unsuitable for drinking.

The ability to rely on existing consents that were granted for different stage of mining started 15 years ago, and which did not foresee these MP4 activities occurring, has significantly constrained council's ability to manage these cumulative effects. Where it is possible to do so, I have recommended consent conditions that would require the Applicant to implement the recommendations of their consultants in regard to mitigation measures and assumptions built into the modelling, as well as conditions to prescribe lower compliance limits for some sub-catchments in the Golden Bar area, with the overall intention being to manage effects and reduce the likelihood of significant adverse effects occurring, despite the existing compliance limits remaining applicable. I consider that these are improvements to

the Applicant's proposed conditions which reduce, but do not eliminate, the likelihood of significant adverse effects on water quality and aquatic life, with the risk being highest in the NBWR and Deepdell Creek. Undue delay in the implementation of any recommended mitigation measures would further reduce the likelihood that increases in contaminant concentrations during the mining phase can be mitigated.

Based on my understanding of the relevant submissions, these conditions are unlikely to fully address the concerns of submitters.

In summary, I consider that significant adverse cumulative effects on water quality and aquatic life are likely, particularly in the Deepdell Creek and NBWR catchments, and I am not satisfied that these can be adequately managed by the current suite of recommended consent conditions.

I would note that confidence in this assessment could be substantially increased if the Applicant would:

- For all catchments, provide an assessment of water quality effects that differentiates the predicted effects of the MP4 activities from the as yet unrealised effects of other consented activities, as has been done for the NBWR. This would aid in understanding the relative significance of the MP4 contributions to the overall cumulative effects in the catchment and thus the overall acceptability of the proposal; or

- Provide enforceable assurances about mitigation measures additional or alternate to those I have recommended above; or

- Agree to manage water quality in accordance with appropriate water quality guidelines, rather than the existing compliance standards, and update compliance limits for all affected catchments to reflect this. I believe it would be *ultra vires* for me to recommend such changes; hence, they must come from the Applicant.

If this information were to be provided, the assessment in this section and any resulting conclusions or recommendations may be updated.

6.1.2.6 Effects on Terrestrial Biodiversity

The assessment in the s95 Report relied on the expert opinion of Glenn Davis of e3. Expert evidence written by Mr Davis, provided after close of submissions and for the purpose of this hearing, is appended to this report at Appendix G.

As noted in the s95 Report, except as it relates to natural inland wetlands and NES-F specified setbacks around such wetlands, indigenous vegetation clearance does not require a land use consent from ORC. However, out of caution, the effects of the vegetation clearance on terrestrial ecology are assessed here because:

- Vegetation clearance is required to accommodate the extension of open pits, and the open pit extensions are directly enabled by the taking and diversion of water which require authorisation by regional resource consents.

- The pit extensions at Coronation, Innes Mills, and Golden Bar encroach upon natural inland wetlands, so a land use consent under the NES-F is required for the earthworks and vegetation clearance required to facilitate the extension in these areas.
- Vegetation clearance is required to accommodate the extension of the GBWRS, and some of this vegetation clearance is within and around natural inland wetlands (and rivers).
- The activities requiring authorisation from regional and territorial authority are intrinsically linked and cannot realistically be implemented in isolation.
- There are shared responsibilities in respect of terrestrial ecology matters under the NPS-IB and the RMA itself.

This section should be read in conjunction with the corresponding s42A reports from WDC and DCC.

New Information

With the exception of a suite of volunteered consent conditions provided on 30 April 2025, no new information has been provided by the Applicant since the application was notified, nor was any information requested.

Actual and Potential Effects and Summary of Evidence

The adverse effects of the proposal are described in the application and supporting technical reports, in the s95 Report, and to an extent in the evidence of Mr Davis. The following summary is taken from Section 9.9.1 of the s95 Report:

- Remove 37 ha of indigenous or semi-natural vegetation comprised of narrow-leaved tussock grassland, shrubland, riparian/wetland vegetation mosaic including 95 m of natural river bed and 335 m of induced river bed (430 m in total) and portions classified as natural inland wetland, and ephemeral wetlands inhabited by 128 indigenous plant species (including fourteen rare species), and which also provides habitat for 11 indigenous bird species, (including one Threatened and two At Risk species).
- Directly impact 45 ha of improved pasture, pine forest (felled), exotic rough pasture and rehabilitated rough exotic grassland on the Northern Gully WRS.
- Potentially affect the surrounding vegetation resulting from project activities extending up to 100 m beyond the project area, containing 51 ha of indigenous vegetation.
- Impact a large but unknown number (likely high 1,000s) of three species of native reptile and their habitats, two of which are listed as At Risk.
- Impact on invertebrate communities inhabiting natural vegetation communities, including one Threatened species.
- Impact on 1.94 ha of wetland and riparian/wetland vegetation mosaic, of which at least 0.708 ha is natural inland wetland and 0.12 is ephemeral wetland.

I note here that the last bullet point is an approximation of the total affected wetland extent, does not clearly distinguish between natural inland wetlands and other wetland areas, and presents an incorrect area of affected ephemeral wetland. There will be at least 0.22 ha of ephemeral wetland lost due to the proposal, although I note that inconsistent numbers are presented throughout the various application documents. However, there have been no changes to the application since notification, and therefore I

adopt the above description as an approximation of the extent of the affected terrestrial ecological features.

While there is a reasonable level agreement between experts about the likely adverse effects, there is less agreement about how these should best be managed, and indeed whether it is appropriate to manage them at all, or if it is necessary to avoid certain activities altogether. Hence, this is what I have focussed on in my report.

The Applicant proposes to manage the adverse effects on indigenous biodiversity through application of an effects management hierarchy, of first seeking to avoid the impact, then remediate before considering mitigation. Following this, offsetting is then employed, and finally compensation. I would note that the hierarchy followed by the Applicant is not entirely consistent with the requirements of the NPS-IB which was in force before the application was lodged. This is discussed further in the Policy Assessment attached as Appendix B but does not change the specific measures that the Applicant is proposing to take to manage effects.

The effects management hierarchy as set out in the NPS-IB requires that the adverse effects of an activity on indigenous biodiversity be managed in the following way:

a) *adverse effects are avoided where practicable; then*
b) *where adverse effects cannot be avoided, they are minimised where practicable; then*
c) *where adverse effects cannot be minimised, they are remedied where practicable; then*
d) *where more than minor residual adverse effects cannot be avoided, minimised, or remedied, biodiversity offsetting is provided where possible; then*
e) *where biodiversity offsetting of more than minor residual adverse effects is not possible, biodiversity compensation is provided; then*
f) *if biodiversity compensation is not appropriate, the activity itself is avoided.*

The NPS-IB applies to indigenous biodiversity in the terrestrial environment. Terrestrial environment is defined in the NPS-IB as:

"…land and associated natural and physical resources above mean high-water springs, excluding land covered by water, water bodies and freshwater ecosystems (as those terms are used in the National Policy Statement for Freshwater Management 2020) and the coastal marine area."

Where the activities would affect the extent or values of natural inland wetlands or rivers, these effects should be managed via the effects management hierarchy as set out in the NPS-FM, rather than the NPS-IB. Throughout the Whirika assessment, and hence throughout the application, wetlands are variably described as natural inland wetland, ephemeral wetland, and riparian/wetland vegetation mosaic. My understanding is that only part of the areas of the ephemeral wetlands and the riparian/wetland vegetation mosaic are in fact distinct natural inland wetlands, and the remaining areas do not meet the definition of natural inland wetland in the NPS-FM. There is no clear boundary between these areas. Further, there is difficulty delineating the aquatic and terrestrial environment in respect of river values, where riparian/wetland (not necessarily natural inland wetland) vegetation mosaics exist along the edges of rivers. The result is blurring of the line between the aquatic and

terrestrial environment and the requirements under each NPS and uncertainty about the extent of affected natural inland wetland.

The assessment provided by Whirika in Appendix 16 does not discuss the effects on wetlands in relation to the NPS-FM and appears to assess the effects on indigenous biodiversity in all wetlands, be they natural inland wetlands, other wetlands, or riparian/wetland vegetation mosaic, solely against the hierarchy set out in the NPS-IB.[8] Indigenous biodiversity values are one of the values supported by wetlands. However, the NPS-FM also requires consideration of values other than indigenous biodiversity values, such as ecosystem health, hydrological functioning, mahika kai and other Māori freshwater values, and amenity values. It is not abundantly clear how, or if, these values have been considered by the Applicant.

The discussion below should be read as relating to all the effects of the MP4 proposal on indigenous biodiversity values. This addresses the requirements of the NPS-IB in the terrestrial environment, and partially addresses the requirements of the NPS-FM in respect of natural inland wetland values and riparian/wetland values on the margins of rivers.

Except to avoid the MP4 activities entirely, there are no other practicable ways in which adverse effects on indigenous biodiversity can be avoided.

Measures proposed to remedy adverse effects include:

1. Structure and rehabilitate the margins of WRS and deposit larger aggregate and boulders to provide habitat for lizards under the guidance of the Lizard Management Plan (**LMP**). Monitoring of lizard colonisation is not proposed.

2. Rehabilitation of Golden Bar WRS to narrow-leaved tussock grassland. 23 ha of the 48-ha extension of the Golden Bar WRS will be rehabilitated to 80% cover of narrow-leaved tussock grassland by spreading tussock seed and planting subdivided or nursery grown 1 m tall narrow-leaved tussock plants at 2 m spacing within a stock fenced area.

3. The proposed Golden Bar, Innes Mills, and Coronation Pit Lakes will produce replacement habitat similar to what currently occurs at Golden Bar Pit and Coronation North Pit.

4. Mine workings will be actively or passively rehabilitated to allow an equivalent area of suitable exotic vegetation communities to develop that can support lizard and bird populations.

5. Replanting the Coronation Spillway with narrow-leaved tussock grasses and *Celmisia hookeri* plants.

I agree that these measures are best described as 'remediation' in the sense that they will go some way, after the activity is complete, to replacing the impacted terrestrial ecological values at the site that the

[8] Application Appendix 16 *Macraes Phase 4 Project Impact Management Plan V3*, prepared by Whirika and dated 17 February 2025.

impact occurred. These measures are either directly reflected in the Applicant's proposed consent conditions, or are implicit requirements of management plans, such as the Lizard Management Plan. Mr Davis is generally supportive of these measures but notes an absence of detail on plant size and numbers, density of planting, performance metrics, monitoring, and adaptive management measures (such as replanting). This detail is important and needs to be documented to ensure that performance can be monitored accurately. Without this level of detail, the drafting of appropriate consent conditions is difficult.

Measures proposed to mitigate adverse effects include:

1. Minimising project effects of dust, noise, weeds, fire, sediment, contaminants on the surrounding area.

2. Salvage of up to 2,100 lizards from impacted areas to an area in the MEEA which will have been subjected to predator control programme and will later be protected by a predator fence (this action is also being undertaken to satisfy the requirements of the Wildlife Act (1953)).

3. Rescuing Declining shrub *Carmichaelia petriei*, Naturally Uncommon rush *Juncus distegus,* and Data Deficient shrub *Melicytus aff. alpinus* which have been identified as plant species that are of moderate or higher ecological importance or that are of restricted distribution within the Macraes ED to safe site(s) in Ecological Enhancement Areas (including OceanaGold covenants).

4. Salvage of tussock grass host plant habitat of *Orocrambus sophistes*, a Threatened invertebrate species (if proved to be present) to re-create or enhance suitable habitat in a protected site.

5. Rescuing the Naturally Uncommon mountain daisy *Celmisia hookeri* in the Coronation Spillway footprint and replanting these in a fenced area adjacent to the newly-constructed spillway.

These measures would be described as mitigation in the sense that they will reduce the adverse effects. Whether they minimise, i.e. reduce to the lowest practicable level, these effects is less clear. As for the proposed remedial measures, Mr Davis is generally supportive of these measures but notes an absence of detail, performance metrics, monitoring, and adaptive management measures. He considers that it is appropriate to defer the provision of much of this information to the post-consenting phase through the preparation and certification of management plans. I agree that overall objectives of these mitigation measures 1-3, and 5 are adequately captured in consent conditions and that it is acceptable to defer the fine details to management plans.

The exception to the above generally agreed matters is the proposal to remove, stockpile, and replant the tussock grass host plant of the *Orocrambus sophistes*, which is a Threatened invertebrate species. Mr Davis states that the proposed excavation of tussock grassland and subsequent re-establishment is feasible, and he is aware of this being undertaken successfully on other projects. However, in this case, the purpose of this tussock translocation is to ensure the survival of any *Orocrambus sophistes* population. This is fraught with issues; there is very little information about this moth, its habitat, or the potential success of any translocation. Furthermore, the Applicant has not proposed any methodology for the vegetation removal, how or where such a vast quantity of tussock grassland would be stockpiled

and for how long, the management of the re-established tussocks, or any monitoring programme to determine the success of translocation and survival of the moth. As such, while this could in theory be considered a measure to minimise adverse effects on moth populations, I do not consider that it is a mitigation measure of any significance due to its hypothetical nature. It is not clear from the application material if potential moth habitat is present within the 10 m NES-F setback of natural inland wetlands; however, areas of natural inland wetland are present within the area of tussock grassland that are the habitat of this moth species, and which would be cleared to facilitate the extension of the Golden Bar WRS.

The measures to remedy and minimise are insufficient to redress all the adverse effects on indigenous biodiversity, and the proposal will have more than minor residual adverse effects on tussock grassland, shrubland, lizards, invertebrates, riparian/wetland vegetation mosaic, wetlands, and some bird species. While it is difficult to quantify the residual adverse effects given the uncertainty of the success of the mitigation and remedial work proposed, Mr Davis agrees that the residual adverse effects are appropriately characterised by Whirika.

The Applicant proposes to offset and/or compensate for these residual adverse effects.

Proposed Offsetting and Compensation Measures

Offsetting and compensation are the only measures available to address the residual adverse effects of the MP4 proposal. The effects management hierarchy requires that residual more than minor adverse effects first be addressed by offsetting. If offsetting is not available or not possible, compensation should be considered.

The goal of both biodiversity offsetting and biodiversity compensation is to produce positive effects to counteract the residual adverse effects of a development. These positive effects will ideally result in an overall benefit to indigenous biodiversity. Offsetting provides redress for biodiversity losses by creating 'like-for-like' or 'like-for-better' biodiversity gains elsewhere, guided by the biodiversity offsetting principles. Where it is technically impossible to achieve an offset exchange, compensation may be utilised, guided by biodiversity compensation principles. Compensation measures differ from offsets in that they cannot produce benefits that are equivalent to the losses and therefore provide the worst outcomes for the affected biodiversity, albeit potentially positive effects for other biodiversity.

For offsetting or compensation to be appropriate, they must adhere to the principles set out in the NPS-IB or NPS-FM (as relevant).[9,10] If these principles cannot be achieved, then the offsetting or compensation is not appropriate and cannot be used to redress the adverse effects.

Central to the proposed offset and compensation package is the establishment of a designated ecological enhancement area – the Murphys Ecological Enhancement Area (**MEEA**) within the Murphys Creek catchment. The MEEA would be protected by a covenant. It is at this site that the majority of the proposed offsetting and compensation measures would occur, including being the recipient site of salvaged lizards. This was clearly described in the application, supporting technical information, and at

[9] NPS-IB Appendix 3: Principles for biodiversity offsetting and Appendix 4: Principles for biodiversity compensation
[10] NPS-FM Appendix 6: Principles for aquatic offsetting and Appendix 7: Principles for aquatic compensation.

a site visit with the specific purpose of viewing and discussing the MEEA. Mr Davis considers that the MEEA site is well situated for the purpose of achieving the proposed offset objectives.

The proposed offsetting for the loss of the ephemeral wetlands in the Coronation Area will not occur within the MEEA but will occur on the flat sloping exotic grassland dominated spur on the Taieri Ridge, approximately 3.5 km west of the Coronation 6 Pit.

The offset design will be delivered via an Ecological Enhancement Area Management Plan (**EEAMP**). This has not been provided with the application, despite requests from Mr Davis through the s92 process. This is atypical for projects of this scale and increases the reliance on adequate consent conditions to accurately capture project commitments and performance objectives and to ensure that these are monitored effectively over the life of the project, which is likely to extend beyond the life of the mine. This reduces the confidence in the overall process.

An overarching issue is the apparent lack of detailed baseline ecological characterisation of the MEEA, or any other area that may be used for offsetting or compensation activities. This is critical to ensuring that the performance of any offset or compensation can be monitored. While Mr Davis considers that it is acceptable for the Applicant to provide this information following the grant of consents it is essential that this survey is completed prior to commencing any offset or compensatory measure, including prior to receiving salvaged lizards at the MEEA.

Measures proposed to offset adverse effects include:

1. Creating a tussock grassland and shrubland offset at the MEEA and fund the ecological management of this area. Stock will be excluded with a stock fence and pest control undertaken. These offsets will provide habitat that benefits lizards, invertebrates, and birds, but this is not the primary purpose of the offset.
2. Creating an offset for impact on ephemeral wetlands at Coronation by creating new wetlands (the ephemeral wetland offset).
3. Creating an offset for impact on wetlands at Innes Mills Stage 10 by creating a new wetland (the wetland offset).

Mr Davis considers that it is likely the proposed tussock grassland and shrubland offset can achieve a no-net-loss ecological outcome, although there is an absence of important detail in the description of the shrubland offset to explain how planting will take place and how performance will be measured. These offsets are considered generally consistent with principles 1-8, and 11 as set out in the NPS-IB. Mr Davis is unable to comment on whether the offset has been appropriately informed by mātauranga Māori or if adequate tangata whenua or stakeholder engagement has occurred.[11] The submission from Kā Rūnaka suggests that this has perhaps not been adequate. It is possible that the Applicant or submitters can provide further detail on whether these principles have been achieved, either via evidence or at the hearing.

[11] NPS-IB Principle 9 Science and mātauranga Māori; Principle 10 Tangata whenua and stakeholder participation.

In relation to the proposed ephemeral wetland offset, Mr Davis states that the Applicant has not provided any evidence or case studies to demonstrate that ephemeral wetlands can be successfully constructed and self-sustaining. The proposal is considered experimental and does not meet Principles (2)(c), 3, or 6 of the NPS-IB offsetting principles (or the equivalent NPS-FM principles).[12] I note that biodiversity compensation is not available because principle (2)(a) cannot be met on the basis that the affected biodiversity is irreplaceable of vulnerable.[13] The activity (removal of ephemeral wetlands) must be avoided. I note that Bioresearches identify ephemeral wetlands and their densely vegetated fringes as likely lizard habitat.

Similar issues are raised with the proposed offsetting for the loss of wetlands in the Innes Mills area. As these are not ephemeral wetlands, there may be a greater chance of success. However, due to the lack of detail Mr Davis is unable to determine whether the offset will be successful. In my view, this means that Principle 3 of the NPS-IB (or the NPS-FM) cannot be demonstrated.

In summary, the proposed offset may be appropriate for the tussock grassland and shrubland, subject to confirmation that all of the NPS-IB offsetting principles can be met, and subject to additional detail being provided in relation to planting density and plant numbers along with the performance metrics, monitoring and adaptive management. The proposed offset for the ephemeral wetlands does not meet the offsetting principles and therefore offsetting is not appropriate. The proposed (Innes Mills) wetland offset is also subject to significant uncertainty and there is insufficient information available to demonstrate that it can meet the offsetting principles. Compensation may be an option for these non-ephemeral wetlands; however, this has not been proposed by the Applicant and therefore cannot be considered here.

It is not possible to offset all adverse effects, particularly in cases where it is not possible to reliably undertake no net loss calculations. This is often due to difficulties in quantifying the population of a species or their habitat. In the case of this MP4 proposal, it is not possible to offset for the effects on lizard, bird, or invertebrate populations or habitat due to difficulties in measuring species populations. Additionally, it is not possible to offset the effects of the riparian/wetland vegetation mosaic as these communities are not easily amenable to management. Instead, the Applicant proposes to provide ecological compensation for these effects, and this will be based on an offsetting approach where possible.

Measures proposed to compensate for adverse effects include:

1. Constructing a predator fence around at least 45 ha of suitable habitat and removing all mammalian predators to benefit lizards and birds (including taoka species).
2. Creation of replacement rock tor habitat for lizards.
3. Research into invertebrate community response to changes in tussockland habitat and researching habitat of *Orocrambus sophistes* (if proved to be present).

[12] NPS-IB Principle 2 When biodiversity offsetting is not appropriate (c) there are no technically feasible options by which to secure gains within an acceptable timeframe; Principle 3 Net gain; Principle 6 Long-term outcomes. The NPS-FM principles are the same, except for Principle 3 requires no net loss and preferably a net gain.
[13] NPS-IB Principle 2 When biodiversity offsetting is not appropriate (a) residual adverse effects cannot be offset because of the irreplaceability or vulnerability of the indigenous biodiversity affected (equivalent wording on NPS-FM).

4. Protection and enhancement of riparian/wetland vegetation mosaic including approximately 860 m of stream bed, and 0.008 ha of areas classified as natural inland wetland.
5. Fencing off a 100 m length of the gully bottom below Coronation Spillway.
6. Contingency measures associated with lizard salvage.

The installation of a predator proof fence around the MEEA to support existing lizard populations and provide habitat for salvaged lizards is supported by Mr Davis, who considers that such a fence is the only credible method to ensure that the required uplift in lizard populations is achieved, and meets most of the biodiversity offsetting principles in the NPS-IB. Of concern however is the uncertainty associated with future governance and management of the MEEA and lizard populations i.e. the long-term outcomes, and Mr Davis is unconvinced that level of information provided by the Applicant is sufficient to provide confidence that long term outcomes will be achieved.[14]

In the opinion of Mr Davis, the proposal to create new rock tor habitat for lizards to compensate for the loss of 12 rock tors that will be lost as a result of the MP4 project is considered experimental and unsupported by any evidence. It is known that natural rock tors provide important habitat for lizards, particularly the At Risk (declining) korero gecko. However, as acknowledged by Whirika in their assessment, the effectiveness of creating rock tors remains unknown. As such, in the opinion of Mr Davis, the loss of the rock tors is likely to be irreversible. This means that principle (2)(b) of the NPS-IB compensation principles cannot be met, and compensation is not available to the Applicant.[15] In accordance with the effects management hierarchy, if compensation is not available then the activity itself (removal of rock tors) must be avoided.

The proposal to undertake research on the response of invertebrate communities to changes in their tussockland habitat is supported by Mr Davis insofar as it would contribute important information in relation to invertebrate communities, in particular to the conservation of the threatened moth *Orocrambus sophistes.* However, the use of compensation to redress the significant adverse effects on a threatened species is not appropriate, as it cannot meet NPS-IB principles (2)(a) or (2)(b). As the residual adverse effects cannot be offset and compensation is not available, the activity (clearance of tussock habitat of the moth) must be avoided.

Only a single specimen of *Orocrambus sophistes* has been found to date. Notably, however, only one survey has been undertaken and this is when the specimen was located. This survey was undertaken in 2022 at an unfavourable time of year (for invertebrate sampling) and despite the findings and the potential implications for this application the Applicant has to the best of my knowledge not undertaken any further surveys in the last three years or undertaken any of the research now proposed and relied on for this application. This is despite the Golden Bar area where the moth was found being well outside the current mine operational area and there being no operational or health and safety constraints (that I am aware of) that would have prevented surveys occurring. I understand that at the time of writing this report the Applicant may be undertaking an additional survey and that the results may be presented in evidence. If this is the case, it would be helpful if the Applicant could provide details

[14] NPS-IB Principle 6 Long-term outcomes
[15] NPS-IB Principle 2 When biodiversity offsetting is not appropriate (b) effects on indigenous biodiversity are uncertain, unknown, or little understood, but potential effects are significantly adverse or irreversible.

of the methodology used, and Suitably Qualified and Experienced Person (**SQEP**) interpretation of the findings.

In order for clearance of tussock grassland (habitat of the moth) to go ahead, the Applicant must be able to minimise or remedy effects on this moth and its habitat such that any residual adverse effects are no more than minor. For this to be achievable, the Applicant must undertake additional surveys at appropriate times of year and utilising appropriate methods, as recommended by a SQEP until there is sufficient data for a qualified person to say with the required degree of certainty that the moth is or isn't there. The Applicant would need to carry out the research that they have proposed in this application to understand the habitat and behaviours of the moth to have certainty that effects can be minimised or remedied. In my opinion, it is not appropriate for this to be imposed as a consent condition because one of the possible outcomes of the research is that any moth population is unable to be moved. In which case, the Applicant would be left with a consent that they could not use.

The Applicant proposes a bird enhancement project as a compensatory measure for effects on birds. The intention is to use pihoihoi (NZ pipit) as a surrogate for other bird species in the area. Compensation is proposed because of the difficulty in quantifying the impact of the project on resident pihoihoi populations, or the effectiveness of any enhancement project. The predator-proof fence and predator removal inside the fence will be the primary measure used to enhance the pihoihoi populations. It is noted that other revegetation and habitat enhancement activities will also benefit pihoihoi. Mr Davis is supportive of this proposed compensatory measure.

Cumulative Effects

Described above are the effects directly attributable to the MP4 proposal. Consideration of cumulative effects is also important. Cumulative environmental impacts resulting from many different, often individually insignificant, or unaccounted for, effects or because of failures in previously implemented effects management can accumulate over time to produce an overall effect greater than envisioned at each project stage. In addition, non-project related effects potentially resulting from surrounding land use practices such as pastoral farming activities can act in conjunction with project effects to generate unforeseen ecological impacts over the longer term.

The staged implementation approach to the Macraes mine has to date impacted over 2,000 ha of land, an unknown portion of which previously supported indigenous vegetation and habitat for lizards, birds, and invertebrates. Over the last 30 or so years, mining and farming activities have led to degradation of habitats and ecosystems. This is evidenced by much of the MP4 project being located within Threatened Land Environments of New Zealand (**LENZ**) which are environments that have less than 20% indigenous cover remaining. Mr Davis explains that the 20% threshold is important, because it is at this point that biodiversity loss can accelerate. In this context, incremental habitat loss or degradation or fragmentation, which in other scenarios could be disregarded as insignificant, can have disproportionate negative outcomes for biodiversity. This is particularly pertinent for the 'small' impacts such as those that will occur in the Central Mining Area. These areas are heavily disturbed by mining, and only small, fragmented areas of vegetation and habitat remain.

I consider that the cumulative terrestrial ecology effects do not appear to be well understood or accounted for in the current proposal. The application AEE states in Table 5.5 that the cumulative

terrestrial ecology effects are less than minor. It is not clear to me how this conclusion has been arrived at, although I assume the application must be considering only the 'cumulative' effects of the MP4 project elements, must assume complete success of the offsetting and compensatory actions, and must be disregarding any previous effects on terrestrial ecology that have occurred over the life of the mine. I do not consider that it is appropriate to consider the MP4 proposal independently of past and present terrestrial ecology effects.; however, I am not sure if the Applicant could provide any meaningful information in regard to the terrestrial ecological impacts of previous activities that have occurred across the mine site, due to the probable absence of historic baseline survey information. This is particularly difficult in relation to natural inland wetlands, including ephemeral wetlands, as the definition and perceived value of these features has changed over time. Therefore, I consider that a precautionary approach should be taken in regard to potential cumulative effects to avoid making any cumulative effects worse. I understand that past and present rehabilitation, offsetting, and compensation management actions have had varied success, and it will be of critical importance that appropriately prescriptive consent conditions are imposed for this MP4 proposal, if consents are granted.

Submissions

Six submissions were received in relation to terrestrial ecological effects:

- Messrs Parata and Hay stated in their submission that 90% of native lizard and skink habitat has been wiped out, and that changes to the topographical landscape have ruined native flora and fauna. Concerns about breaches of the RMA and QEII covenants were raised.

- Fish and Game state that they expect the proposal will have little impact on game birds. Some loss of habitat for paradise shelduck/pūtangitangi is anticipated to result from the proposal, but as this is a common species the amount of habitat supporting paradise shelduck that may be lost is not a major concern to Fish and Game.

- DoC have concerned about the potentially significant adverse effects on terrestrial indigenous fauna, flora, and habitats. DoC consider that the effects of this development must be considered cumulatively with the effects of the existing mine development. DoC further state that given the presence of threatened species with limited distribution, there should be an absolute bottom line of not increasing the risk to any of these species. Doc are concerned about the lack of certainty about the management of effects, noting that at the time of their submission there were no consent conditions yet proposed by the Applicant. It is noted that separate approvals will be required under the Wildlife Act in relation to protected native lizards.

- Forest and Bird express concerns about the potential significant adverse effects on terrestrial ecology, including flora, fauna, wetlands, birds, lizards, and invertebrates.

- Kā Rūnaka express concerns about biodiversity, taoka species, cumulative effects, and the durability and sustainability of proposed offsets and mitigations.

- Neil Roy speaks to concerns with poor compliance with previous consent conditions in relation to the rehabilitation of land, pasture rehabilitation not being equivalent to the pre-mining state, and poor control of invasive weeds.

It is clear that adverse effects on terrestrial biodiversity are of concern to submitters. In light of the assessment above, the consent conditions proposed by the Applicant are unlikely to satisfactorily address the concerns of these submitters.

Conditions

Appendix C attached does not contain any comments or recommendations about the management of indigenous biodiversity effects in relation to natural inland wetlands because I do not consider that there is a pathway for these activities to occur, based on the current information. Adverse effects on indigenous biodiversity outside of natural inland wetlands are managed via the combined DCC and WDC land use consent. I understand that DCC and WDC have reserved their comments on the Applicant's proposed conditions due to insufficient detail being available to enable drafting of appropriate consent conditions. I support this position and note the various comments by Mr Davis in his evidence in relation to the level of information that has been provided being insufficient to have confidence that the long-term outcomes of offsetting and compensation can be achieved.

Conclusions

There are significant residual adverse effects on indigenous biodiversity after measures to minimise and remedy effects have been exhausted. The Applicant proposes to offset or compensate for these effects and considers that after doing so the effects will be suitably redressed. I disagree.

The effects management hierarchy is clear; once measures to avoid, minimise, or remedy adverse effects are exhausted, and more than minor adverse effects remain, these effects must be offset or, if they cannot be offset, then compensation must be considered. If compensation is not appropriate, the activity itself must be avoided. Relying on the evidence of Mr Davis, I find that:

- The loss of ephemeral wetlands cannot be avoided, minimised, remedied, or offset, and compensation is not available as these are naturally uncommon critically endangered ecosystems. This activity must be avoided.

- The adverse effects on lizards cannot be adequately avoided, minimised, remedied, or offset. Certain compensatory measures, such as predator-proof fencing and the lizard enhancement project, are appropriate. However, compensation is not available for the loss of 12 rock tors as the effects on indigenous biodiversity are uncertain, unknown, or little understood, but potential effects are significantly adverse or irreversible. This activity must be avoided.

- The adverse effects on the threatened moth *Orocrambus sophistes* cannot be adequately avoided, minimised, remedied, or offset, and compensation is not available because the indigenous biodiversity affected is irreplaceable or vulnerable, and effects on indigenous biodiversity are uncertain, unknown, or little understood, but potential effects are significantly adverse or irreversible. This activity must be avoided.

- The adverse effects on the areas of natural inland wetland adjacent to the Innes Mills Pit cannot be adequately avoided, minimised, remedied, or offset. Compensation has not been proposed by the Applicant so cannot be considered here. This activity must be avoided.

Other proposed offsetting and compensatory measures are generally considered able to meet the relevant principles. The Applicant may be able to demonstrate, through provision of information in their evidence, that the offsetting for the loss of the Innes Mills wetlands can meet the offsetting principles or, if offsetting is not feasible, how the compensation principles are met.

In summary, the proposal will have significant residual adverse effects on natural inland wetlands, ephemeral wetlands, lizard habitat, and habitat and potential population of a threatened invertebrate that cannot be avoided, minimised, remedied, offset, or compensated for. These effects are considered to be unacceptable, and the activities resulting in these effects must be avoided. It is my understanding that these activities are:

- The Coronation Stage 6 Pit Extension (rock tors and ephemeral wetlands)
- The Golden Bar Stage 2 Pit Extension (rock tors)
- The Golden Bar WRS Extension (rock tors and threatened moth)
- The Innes Mills Stage 10 Extension (natural inland wetlands)

It is evident that the adverse effects on terrestrial biodiversity resulting from the MP4 proposal are significant and unacceptable, whether considered in isolation or cumulatively with historic and ongoing activities, and these are unable to be adequately managed by consent conditions. For the avoidance of doubt, my conclusions about unacceptable and unmanageable effects remain the same whether I am only considering effects in and within NES-F specified setbacks of natural inland wetlands, or whether all effects on indigenous biodiversity are considered.

6.1.2.7 Effects on Air Quality

The assessment in the s95 Report relied on the expert opinion of John Iseli of Specialist Environmental Solutions Limited. Expert evidence written by Mr Iseli, provided after close of submissions and for the purpose of this hearing, is appended to this report at Appendix H.

New Information

With the exception of a suite of volunteered consent conditions provided on 30 April 2025, no new information has been provided by the Applicant since the application was notified, nor was any information requested.

Actual and Potential Effect and Summary of Evidence

There are no changes to the assessment provided in the s95 Report. As set out in the evidence of Mr Iseli, the primary contaminant discharged from mining and associated activities is total suspended particulate (**TSP**). TSP comprises both inhalable fine particles (PM_{10} and to a lesser degree $PM_{2.5}$ and Respirable Crystalline Silica (**RCS**)) which have the potential to cause adverse health effects, as well as larger particulate matter which have potential to cause nuisance dust effects. Mr Iseli agrees with Beca[16]

[16] Oceana Gold – Macraes Gold Project - Air Quality Technical Assessment, Beca 5 March 2024.

that dust nuisance effects are the primary environmental effect of the proposal, with potential health effects being of lesser significance, due to the separation distances between the source of the smaller particulate matter fractions and sensitive receptors.

Submissions

Two submissions relating to air quality were received.

- Richard Geels raises concerns about the mine extension and use of Frasers Pit and other activities close to private dwellings, in part because of the potential for dust. In particular, Mr Geels opposes the extension and use of Frasers Pit for tailings and states that another location should be used for tailings.

- Neil Roy references a dust gauge beside Macraes Road that was removed on the basis that it provided similar dust readings to another gauge close to Redbank Road. Mr Roy states that the gauge near Redbank Road is not prone to mine dust as it is not downwind of the prevailing winds. Mr Roy suggests that a dust gauge beside Macraes Road near the haul road overbridge and closer to Innes Mills Pit would be a more appropriate location to measure dust.

These concerns are adequately addressed in the evidence of Mr Iseli.

Recommendations and conditions of consent

Mr Iseli considers that the conditions proposed by the Applicant are largely appropriate but recommends a limited number of additions and modification. In summary these are:

- Dust deposition monitoring at site DG11 should be reinstated and retained.
- The Dust Management Plan should be prepared by a Suitably Qualified and Experienced Person and should be provided to the Consent Authority for certification.
- Implementation of continuous TSP monitoring in the general vicinity of the Gay Tan historic cottage, corner of Macraes and Gifford Roads, with alerts sent to the consent holder when trigger levels are reached. Wording has been suggested by Mr Iseli; however, feedback from the applicant on the exact wording of this condition is invited.
- Each Discharge Permit should include an appendix that shows the locations of the air quality monitoring sites, not just the overall mine layout.
- A condition requiring implementation and ongoing review of a Greenhouse Gas Mitigation Plan, as per description in the Beca assessment.[17]

I agree that these modifications are appropriate and will ensure that dust is monitored at the most appropriate locations, will enable prompt reaction to dust emissions from the major areas sources and haul road in proximity to sensitive receptors at the village, and will also ensure that an appropriate person prepares and reviews the Dust Management Plan, which is a key part of the effects management strategy at this site.

I have further recommended the following changes to the proposed conditions:

[17] Section 7.12.1 Beca 2024 – *Macraes Energy and Greenhouse Gas Emissions Management Plan*, 9 December 2021

- Requirement for all exceedances of TSP trigger levels to result in an alert being sent to the Consent Holder.
- Deletion of the conditions that provide for a review of conditions within six months of receiving the Cultural Impact Assessment (**CIA**) that was commissioned in 2011. This condition is no longer relevant because a new CIA has been provided.

The above referenced changes are incorporated into the suite of recommended consent conditions attached as Appendix C.

Conclusions
Subject to the recommended consent conditions being adopted, I am satisfied that the potential adverse air quality effects can be managed appropriately and are no more than minor.

6.1.2.8 Effects on Human Health
These effects have been discussed in the preceding sections of this report, specifically at Section 6.1.2.4 (groundwater), Section 6.1.2.5 (surface water), and Section 6.1.2.7 (air quality).

6.1.2.9 Effects on Mana Whenua Values
Aukaha have prepared a CIA on behalf of Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki and Te Rūnanga o Ōtākou.

The CIA identifies cultural values and then assesses the impact of the proposal on those values, including recommended actions and expectations to protect those values. Where impacts cannot be avoided, remedied, or mitigated, it is stated that compensation to Kāi Tahu is expected.

The impacts focus on the following four core values:

1. Mana
2. Mauri
3. Tapu
4. Whakapapa

I do not repeat the contents of the CIA here. I consider that Table 3 (Tūtohi 3) in the CIA provides a helpful summary of the anticipated cultural impacts, as well as recommendations as to mitigations that would provide appropriate redress for adverse cultural effects. Overall, the CIA concludes that the cumulative effects of the Macraes Gold Project on mana, mauri, tapu and whakapapa are significant and the proposed expansion of the Macraes Gold Project will have further impacts on these values.

Kāi Tahu note that the development of this cultural impact assessment was undertaken in parallel with the consenting of Stages 1 and 2 of the Macraes Phase 4 project, including the consenting of the expansion to the Golden Point Underground Mine. Further, the technical reports submitted with the application have been progressively updated in response to further information requests from the Consent Authorities. This has significantly hindered the ability of Kāi Tahu to holistically assess the cumulative impacts of this complex project, and the ability of Kāi Tahu to meaningfully engage with

OceanaGold on the development of a mitigation package that addresses the impacts of the Project. These views were reiterated in the submission from Kā Rūnaka.

On this basis, I consider that the adverse effects on cultural values are more than minor, and potentially significantly adverse when considered cumulatively with the ongoing impacts of historic and current (separately authorised) mining. I do not have enough information to understand whether some or all of these cultural effects are able to be appropriately managed by conditions such that they are acceptable. This is because the Applicant's proposed consent conditions were prepared without access to a CIA endorsed by Kā Rūnaka, and the submission of Kā Rūnaka was made without access to the proposed consent conditions. I anticipate the matter being clarified in Applicant and Submitter evidence, or at the hearing.

The recommended consent conditions discussed in Sections 6.1.2.2 – 6.1.2.8 of this report in relation to geotechnical, water, aquatic and terrestrial ecology, air quality, and human health may also contribute to a reduction in adverse effects on cultural values, although I do not anticipate these being sufficient to alleviate the concerns of Kā Rūnaka as set out in their submission.

Summary – Actual and Potential Effects
As set out in the sections above, the following actual and potential effects are anticipated:

Positive Effects

- Significant regional and national economic benefits, and social benefits.

Adverse Effects

- No more than minor adverse geotechnical effects, adequately managed by conditions.
- No more than minor adverse groundwater effects, adequately managed by conditions.
- Significantly adverse effects on water quality and aquatic ecology, unable to be managed by the currently proposed conditions.
- Significantly adverse effects on terrestrial and wetland biodiversity, unable to be managed by conditions.
- No more than minor adverse effects on air quality, adequately managed by conditions.
- No more than minor adverse effects on human health, adequately managed by conditions.
- More than minor and potentially significantly adverse effects on cultural values, not yet able to be managed by conditions.

Taking into consideration both the positive and adverse environmental effects, the actual and potential effects on the environment are considered on balance to be unacceptable and unable to be managed adequately by consent conditions.

6.2 S104(1)(ab)

The Consent Authority must have regard to any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity.

For ease of reading and understanding the opinions put forward in this report, these matters were discussed at Section 6.1.26.

6.3 S104(1)(b) Relevant Planning Documents

The relevant planning documents in respect of this application are:

- National Policy Statement for Freshwater Management 2020
- National Policy Statement for Indigenous Biodiversity 2023
- Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007
- Resource Management (Measuring and Reporting of Water Takes) Regulations 2010 and Amendment Regulations 2020
- Resource Management (National Environmental Standards for Freshwater) Regulations 2020
- Resource Management (National Environmental Standards for Air Quality) Regulations 2004
- Water Services (Drinking Water Standards for New Zealand) Regulations 2022
- Operative Otago Regional Policy Statement
- Proposed Otago Regional Policy Statement
- Regional Plan: Water for Otago
- Regional Plan: Waste for Otago
- Regional Plan: Air for Otago

The following planning documents are not considered to be relevant to this application and are not discussed any further in this report:

- New Zealand Coastal Policy Statement 2010
- National Policy Statement for Greenhouse Gas Emissions from Industrial Process Heat 2023
- National Policy Statement for Highly Productive Land 2022
- National Policy Statement for Renewable Electricity Generation 2011
- National Policy Statement on Electricity Transmission 2008
- National Policy Statement on Urban Development 2020
- Resource Management (National Environmental Standards for Commercial Forestry) Regulations 2023
- Resource Management (National Environmental Standards for Telecommunications Facilities) Regulations 2016
- Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009
- Resource Management (National Environmental Standard for Marine Aquaculture) Regulations 2020
- Resource Management (National Environmental Standard for Storing Tyres Outdoors) Regulations 2021
- Resource Management (National Environmental Standards for Greenhouse Gas Emissions from Industrial Process Heat) Regulations 2023

6.3.1 National Policy Statement for Freshwater Management 2020

The National Policy Statement for Fresh Water Management 2020 (**NPS-FM**) provides direction to local authorities and resource users regarding activities that affect the health of freshwater and sets out the national objective and policies for freshwater management under the RMA.

The NPS-FM came into force on 3 September 2020, replacing the previous NPS-FM 2014. Part 2 of the NPS-FM sets out the national objective for future freshwater management and 15 separate policies that support this objective.

Section 104 of the RMA has been amended to include section 104(2F) which provides that when considering an application and any submissions received, a consent authority must not have regard to clause 1.3(5) or 2.1 of the NPSFM 2020 (which relates to the hierarchy of obligations in the NPSFM 2020). Subsection (2F) applies despite subsection (1)(b)(iii) and any other provision of the RMA.

The amendment to section 104 applies to applications for a resource consent that is lodged with a consent authority before commencement of the amendments if the consent authority has not served notice of its decision on the application.

As a result, clause 1.3(5) and clause 2.1 (the objective) of the NPSFM 2020 has not been assessed.

The policies in the NPS-FM are relevant when considering an application for an activity which may adversely affect freshwater. The NPS-FM applies to all freshwater (including groundwater) and, to the extent they are affected by freshwater, to receiving environments.

The policies of relevance are set out and assessed in Appendix B.

6.3.3 National Policy Statement for Indigenous Biodiversity 2023

The National Policy Statement for Indigenous Biodiversity (**NPSIB**) came into force on 4 August 2023 and applies to Aotearoa's indigenous biodiversity in the terrestrial environment. Indigenous Biodiversity is defined in the NPSIB as the living organisms that occur naturally in New Zealand, and the ecological complexes of which they are part, including all forms of indigenous flora, fauna, and fungi, and their habitats.

The NPSIB sets out a single objective: to maintain indigenous biodiversity across Aotearoa New Zealand so that there is at least no overall loss in indigenous biodiversity after the commencement date. It is applicable to Significant Natural Areas (**SNA**) but it also applies outside of SNA. The objective is followed by 17 policies. The objective and policies of relevance are set out and assessed in Appendix B.

6.3.4 Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007

Regulations 7 and 8 of this NES need to be considered when assessing discharge permits or water permits that have the potential to affect registered drinking water supplies that provide 501 or more people with drinking water for 60 or more calendar days each year.

There are no such downstream supply points. Granting of consent is not precluded by Regulations 7 or 8.

Regulations 11 and 12 of this NES require the Consent Authority to place an emergency notification condition on relevant consent holders if it is assessed that the activity could pose a risk to the drinking water supply in the case of an unintended event (e.g. a spill or other accident). If the Consent Authority considers that such a risk exists, a condition must be placed on the consents that requires the consent holder to notify the drinking water supplier if such an event occurs. Regulation 11 states that Regulation 12 applies to activities with the potential to affect registered drinking water supplies that supply 25 or more people with drinking water for 60 or more days of a calendar year.

The Stoneburn drinking water supply is sourced from the Waikouaiti River, downstream of the confluence of the NBWR and Murphys Creek, and also downstream of the confluence with Golden Bar Creek in the vicinity of monitoring locations NB01, NB02, NB03. It supplies a population of 86 people. In the case of an unintended event, such as an uncontrolled discharge from Golden Bar Pit, Clydesdale Silt Pond, or Murphys Silt Pond there is potential for a significant adverse effect on the quality of water at the Stoneburn abstraction point.

In accordance with Regulation 12, a consent condition is recommended requiring the consent holder to notify, as soon as reasonably practicable, the registered drinking-water supply operators concerned and the consent authority, if an event occurs that may have a significant adverse effect on the quality of the water at the abstraction point.

6.3.5 Resource Management (Measuring and Reporting of Water Takes) Regulations 2010 and Amendment Regulations 2020

These regulations apply to holders of water permits which allow freshwater to be taken at a rate of 5 litres/second or more. Permit holders are required to, in a manner specified by the regulations, measure their water use at a specific location, verify their water measuring device, keep records, and provide records to Council. The 2020 amendments to the regulations introduced measuring and reporting requirements, to be implemented in a staged fashion starting with larger water takes through to progressively smaller water takes, down to 5 L/s. The minimum requirements in the regulations apply directly to the holders of qualifying water permits, and override any less stringent consent conditions, from the date that the regulations first apply to the consent. While these regulations do not require Council to impose specific conditions on a qualifying water permit, Council is required to enforce the regulations. To ensure that the Consent Holder is clear about their water metering and reporting obligations, consent conditions that reflect the minimum requirements of these regulations are routinely applied to resource consents.

I recommend that consent conditions reflecting the requirements of these regulations are applied to all water permits for the take and use of freshwater where it is physically possible to measure the abstraction of water. For example, such conditions are not recommended for the passive taking of groundwater via seepage into pits, but the conditions are recommended for the taking of surface water (which includes accumulated groundwater) from pit lakes and pit sumps, as well as from takes of groundwater via bores. The Consent Holder must:

- Measure their water use at the point of take
- Measure their water use in 15-minute increments
- Provide daily records to Council via telemetry

The Applicant may choose to apply for an exemption under these regulations to measure their water use at a point other than the point of take, or to provide records at a frequency other than daily. The applications for exemptions are managed separately from this consent process. Any exemption that is granted will be inserted into the relevant water permit by way of a s133A minor correction.

Given the number and complexity of the water takes on this site, the Applicant may wish to consider all their water permits to take and use freshwater and deal with these in a holistic manner outside this consenting process. In the meantime, the consent conditions giving effect to the regulations will apply.

For the avoidance of doubt, even if these conditions are not applied to the relevant water permits, the Applicant would still be required to comply with these regulations.

6.3.6 Resource Management (National Environmental Standards for Freshwater) Regulations 2020 (NES-F)

The NES-F 2020 regulations came into force on 3 September 2020 and were amended in December 2022. The NES-F sets requirements for a range of farming activities and other activities relating to freshwater and natural inland wetlands.

Natural Inland Wetlands

This proposal includes vegetation removal and earthworks in, within 10 m, and within 100 m of natural inland wetlands. These activities are regulated by regulation 45D of this NES-F which states, in part (6):

A resource consent for a discretionary activity under this regulation must not be granted unless the consent authority has first—

(a) satisfied itself that the extraction of the minerals will provide significant national or regional benefits; and

(b) satisfied itself that there is a functional need for the extraction of minerals and ancillary activities in that location; and

(c) applied the effects management hierarchy.

Significant Benefits

The Applicant has provided a report *Assessment of the Economic Effects of OceanaGold's Proposed Extensions to its Open Pit Mining Operations at the Macraes Gold Project*, prepared by Brown, Copeland & Co Ltd, dated 9 February 2024 that describes economic benefits that are, in the opinion of Mr Copeland, both regionally and nationally significant. I accept this assessment and agree that part (6)(a) of regulation 45D is met.

Functional Need

The NES-F imports the NPS-FM definition of "functional need" which means *"the need for a proposal or activity to traverse, locate or operate in a particular environment because the activity can only occur in that environment."* The Applicant states that Mining activities by their nature are constrained by the location of the economic gold bearing ore. At Macraes, OceanaGold mines a well-defined, low grade ore body (the Hyde- Macraes Shear Zone). Extending established pits, whether underground or open pit, to take advantage of the investment in mine development, infrastructure assets and resource consents is the most feasible approach to mining. The average ore grade is not sufficient to make underground mining of the ore targeted by the MP4 proposed open pit extensions economically feasible, therefore, the development of open pit extensions is required. Due to the location of the ore and the need to extend the Coronation, Innes Mills, and Golden Bar Pits, there is a functional need for the activities to be located as proposed, and consequently, no ability to avoid the loss of natural inland wetlands. I am satisfied that there is a functional need for the extraction of minerals and ancillary activities in the proposed locations.

Effects Management Hierarchy

The effects management hierarchy has the same meaning given in Clause 3.21 of the NPS-FM and means:

***effects management hierarchy**, in relation to natural inland wetlands and rivers, means an approach to managing the adverse effects of an activity on the extent or values of a wetland or river (including cumulative effects and loss of potential value) that requires that:*

(a) adverse effects are avoided where practicable; then

(b) where adverse effects cannot be avoided, they are minimised where practicable; then

(c) where adverse effects cannot be minimised, they are remedied where practicable; then

(d) where more than minor residual adverse effects cannot be avoided, minimised, or remedied, aquatic offsetting is provided where possible; then

(e) if aquatic offsetting of more than minor residual adverse effects is not possible, aquatic compensation is provided; then

(f) if aquatic compensation is not appropriate, the activity itself is avoided

As explained in Section 6.1.2.6 above, the Whirika assessment considers the adverse effects on indigenous biodiversity within wetland areas, which include areas of natural inland wetland as well as areas not classified as natural inland wetland, and presents an offsetting proposal in accordance with the NPS-IB. However, in the Application AEE the Applicant states that the adverse effects on natural inland wetland values are managed through application of the effects management hierarchy as set out in the NPS-FM. It appears that the Applicant's assessment against the NPS-FM effects management hierarchy is limited to the effects on the indigenous biodiversity values of these wetlands, and not any other values.

Clause 3.22 of the NPS-FM states that a regional council must not grant consent unless the council is satisfied that:

(a) the council is satisfied that:
- *(i) the applicant has demonstrated how each step of the effects management hierarchy will be applied to any loss of extent or values of the wetland (including cumulative effects and loss of potential value), particularly (without limitation) in relation to the values of: ecosystem health, indigenous biodiversity, hydrological functioning, Māori freshwater values, and amenity values; and*
- *(ii) if aquatic offsetting or aquatic compensation is applied, the applicant has complied with principles 1 to 6 in Appendix 6 and 7, and has had regard to the remaining principles in Appendix 6 and 7, as appropriate, and*
- *(iii) there are methods or measures that will ensure that the offsetting or compensation will be maintained and managed over time to achieve the conservation outcomes; and*

(b) any consent granted is subject to:
- *(i) conditions that apply the effects management hierarchy; and*
- *(ii) a condition requiring monitoring of the wetland at a scale commensurate with the risk of the loss of extent or values of the wetland; and*
- *(iii) conditions that specify how the requirements in (a)(iii) will be achieved.*

I am not satisfied that the Applicant has identified all relevant values of the affected areas of natural wetlands. Indigenous biodiversity values have been well traversed; however, I cannot see how other values, such as ecosystem health, hydrological functioning, Māori freshwater values, and amenity values have been considered. Given the wetlands will be permanently lost it is safe to assume that any such values that were supported by natural inland wetlands would also be permanently lost. Whether the adverse effect of loss of these other values is more than minor and requires offsetting or compensation is not understood. Whether these values could be appropriately managed is also not understood.

Nonetheless, stepping through the effects management hierarchy in relation to the effects on indigenous biodiversity values of natural inland wetlands:

Given the functional need for the Coronation, Innes Mills, and Golden Bar activities to locate as proposed, it is not possible to avoid the loss of natural inland wetlands. It is not possible to minimise or remedy the permanent loss of the wetlands and the Applicant proposes to offset for the loss. As discussed in Section 6.1.2.6 earlier in this report, it is the opinion of Mr Davis that the proposed offsetting for the loss of ephemeral wetlands (and associated loss of indigenous biodiversity values) does not comply with the required principles as set out in NPS-IB Appendix 3. For the same reasons, the offsetting does not comply with the requirements of the corresponding principles in Appendix 6 of the NPS-FM. Therefore, offsetting is not possible. The Applicant has not proposed to compensate for the loss of the ephemeral wetlands, but I note that this option is not available for the reasons set out in Section 6.1.2.6. The effects management hierarchy requires the activity to be avoided. The Applicant has not proposed to avoid the activity, so the proposal is not consistent with the effects management hierarchy.

In relation to other areas of natural inland wetland within the Innes Mills Stage 10 buffer, Mr Davis considers that it may be possible to achieve the proposed offset, but insufficient information has been provided to have confidence about this. In my view, this means that NPS-FM principle (3) *no net loss and preferably net gain* cannot be demonstrated. The NPS-FM effects management hierarchy requires the activity to be avoided. The Applicant has not proposed to avoid the activity, so the proposal is not consistent with the effects management hierarchy.

The management of small natural inland wetlands at Golden Bar is less clear. There is an area of natural inland wetland near the Clydesdale Silt Pond, as well as areas of natural inland wetland amongst riparian/wetland vegetation mosaic to the northeast of the current Golden Bar Pit. Both of these areas will be lost. Whirika state that the loss of the silt pond wetland will have less than minor effects and therefore does not require further management. An assessment of the adverse effect of the loss of the riparian/wetland vegetation mosaic is not provided; however, Whirika state that this will be managed via the existing compensation proposal for riparian/wetland vegetation mosaic at the MEEA. From this I assume that residual adverse effects could be more than minor. Mr Davis is of the opinion that the proposed compensation for riparian/wetland vegetation mosaic is appropriate under the NPS-IB. Therefore, in respect of the indigenous biodiversity values, the same compensation under the NPS-FM is expected to be appropriate.

In my opinion, NES-F regulation 45D precludes the granting of consent in respect of the ephemeral wetlands near to Coronation Pit. Further, NES-F regulation 45D also precludes the granting of consent in respect of the natural inland wetlands adjacent to Innes Mills Pit.

Rivers

The proposal involves the reclamation of a river. This activity is regulated by regulation 57 of this NES-F which states, in part (2):

A resource consent for a discretionary activity under this regulation must not be granted unless the consent authority has first—
(a) satisfied itself that functional need for the reclamation of the river bed in that location; and
(b) applied the effects management hierarchy.

Functional Need

Regarding the functional need for the riverbed reclamation, there is a clear functional need for the Golden Bar Pit extension to occur in the proposed location, and there is a functional need for ancillary activities – such as the extension of the Golden Bar WRS – to be located as proposed. Hence, there is a functional need for the river reclamation. The Applicant has considered other locations for the deposition of waste rock; however, these options were discounted on the basis that they would require larger areas of ground and riverbed disturbance. I am satisfied that there is a functional need for the activities ancillary to the extraction of minerals in the proposed location.

Effects Management Hierarchy

The Applicant proposes to manage adverse effects on river extent and values through application of the effects management hierarchy as set out in the NPS-FM. Given the functional need for the Golden Bar WRS to locate where proposed, it is not possible to avoid the reclamation. The Applicant states that

they will minimise effects by minimising the footprint of any intrusion. I don't consider that this is a minimisation measure, as the proposal is to reclaim 430 m of riverbed; if this were able to be minimised then the proposal would be to reclaim a smaller length of riverbed. It is not possible to remedy the effects of the reclamation, because the riverbed will be covered by a waste rock stack. Offsetting for the loss of riparian/wetland vegetation mosaic that adjoins the riverbed is not considered feasible due to difficulties in improving their condition and because they already appear in all suitable sites. Hence, the Applicant will compensate for the effects on river extent and values through protecting double the length (at least 860 m) of river within the MEEA which contains similar or better value watercourse and includes areas of adjoining riparian and wetland vegetation. This proposal is considered appropriate by Dr Greer.

In my opinion, NES-F regulation 57 does not preclude the granting of these consents.

6.3.7 Resource Management (National Environmental Standards for Air Quality) Regulations 2004

In October 2004 the New Zealand Government introduced a set of National Environmental Standards for Ambient Air Quality (**NES-AQ**). This NES was subsequently amended in 2005 and 2011. These standards replace the previous Ambient Air Quality Guidelines (NZAAQG) for PM_{10}, SO_2, NO_2, O_2 and CO. In effect, the new standards convert the ambient air quality guidelines into standards and stipulate a maximum number of allowable exceedances of the concentration limits. For sulphur dioxide, the standards stipulate an absolute maximum concentration limit.

The proposal includes the discharge of contaminants (primarily TSP, and to a lesser extent products of combustion) to air within an airshed that is not deemed – in accordance with Regulation 17(4) of this NES-AQ – to be polluted. Previous monitoring results for PM_{10} indicate that PM_{10} concentrations are well below the NES-AQ threshold of 50 micrograms per cubic metre expressed as a 24-hour mean. Mr Iseli states that these results are in line with expectations and are generally consistent with his experience of other large dust-source sites.

The NES-AQ does not preclude the granting of consents.

6.3.6 Water Services (Drinking Water Standards for New Zealand) Regulations 2022

These regulations, which came into force on 14 November 2022, set the Drinking Water Standards for New Zealand. The standards set limits for the concentration of determinands in drinking water. The limits are referred to as maximum acceptable values (**MAVs**). The MAVs for any determinand must not be exceeded at any time. Under the Water Services Act 2021, all drinking water suppliers must ensure that the drinking water they supply complies with the standards, regardless of the nature of the source water used or the number of people served by the supply.

As stated in the evidence of Dr Greer, the compliance standards for arsenic are set well above the maximum acceptable value prescribed in these standards.

6.3.7 Otago Regional Policy Statements and Regional Plans

The RPSs provide an overview of the resource management issues for the Otago Region and the ways of achieving integrated management of its natural and physical resources. There are currently two regional policy statements in play in the Otago Region:

- Otago Regional Policy Statement 2019 (**ORPS 2019**) fully operative; and
- Proposed Otago Regional Policy Statement (**P-ORPS 2021**), which was first notified on the 26th of June 2021 and on 30 September 2022 for the freshwater instrument components. On 30 March 2024 the ORC notified its decisions on the submissions on P-ORPS 2021. There are several appeals that relate to the P-ORPS 2021. Freshwater planning provisions are appealed to the High Court; non-freshwater planning instruments are appealed to the Environment Court.

At the time of writing all appeals on the freshwater provisions of the P-ORPS 2021 have been resolved, except for LF–WAI–O1 – Te Mana o te Wai. Certain non-freshwater provisions remain under appeal. Recognising that the P-ORPS 2021 has a different emphasis from the ORPS 2019, there are a number of provisions in the P-ORPS 2021 that have no clear equivalent in the ORPS 2019, and vice versa. However, in general I consider that:

- Significant weight should be given to the provisions of the P-ORPS 2021 that are beyond appeal (or were not appealed) over equivalent provisions in the ORPS 2019.
- Less weight should be given to the provisions of the P-ORPS 2021 that remain subject to appeal, except where they clearly align with higher order documents, such as the NPS-FM and NPS-IB, and except when there is no equivalent provision in the ORPS 2019, in which case additional weight can be placed on the P-ORPS 2021 provisions.

The relevant regional plans are the:

- Regional Plan: Water for Otago (**RPW**)
- Regional Plan: Waste for Otago (**RPWaste**)
- Regional Plan: Air for Otago (**RPA**)

The current regional plans pre-date and do not yet fully give effect to the higher order documents, being the ORPS 2019, P-ORPS 2021, NPS-FM, and NPS-IB. As such, more weight is given to equivalent provisions in the higher order documents.

In the interest of ensuring this report is easier to read, the detailed assessment against the relevant provisions of the NPS-FM, NPIS-IB, ORPS 2019, the P-ORPS 2021, and the RPW, RPWaste, and RPA, and the Kāi Tahu ki Otago Natural Resource Management Plan 2005 (see Section 6.4 below) is provided in Appendix B. Key findings are summarised below:

Table 3 *Summary of consistency with statutory documents*

Provision	Finding
National Policy Statement for Freshwater Management 2020 (NPS-FM)	
Policies 1, 5, 6, 7, 9, 10, 15	Inconsistent
Policies 2, 12	Partially consistent

Policies 3, 11, 13, 14	Consistent
National Policy Statement for Indigenous Biodiversity 2023 (NPSIB) – amended October 2024	
Objective	Contrary
Policies 1, 2, 3, 8, 10	Inconsistent
Policy 4	Partially consistent
Policies 5, 15	Consistent
Otago Regional Policy Statement 2019 (ORPS 2019)	
Objectives 1.1, 2.1, 2.2, 3.2, 5.4 Policies 1.1.1, 2.2.1, 2.2.2, 2.2.3, 3.1.1, 3.1.2, 3.1.9, 3.2.2, 3.2.5, 3.2.6, 3.2.16, 5.4.3, 5.4.6A, 5.4.8	Inconsistent
Objectives 1.2, 3.1 Policies 3.1.1, 3.1.2, 5.4.6	Partially consistent
Objectives 4.1, 4.6, 5.3, Policies 3.1.3, 3.1.6, 3.1.8, 3.2.1, 3.2.15, 4.1.1, 4.1.4, 4.1.5, 4.6.4, 4.6.5, 5.3.1, 5.3.4, 5.4.1, 5.4.2	Consistent
Proposed Otago Regional Policy Statement (P-ORPS 2021) and Proposed Otago Regional Policy Statement – Freshwater Instrument Components 2021	
Objectives MW-O1, LF-WAI-O1, LF-FW-O8, LF-FW-O9, ECO-O1 Policies MW-P3, IM-P3, IM-P6, IM-P13, LF-WAI-P1, LF-WAI-P3, LF-WAI-P4, LF-FW-P7, LF-FW-P10A, LF-LS-P21, ECO-P4, ECO-P6	Inconsistent
Objectives LF-WAI-O1A, LF-VM-O3, LF-VM-O4, LF-VM-O5 Policies IM-P8, IM-P10, LF-WAI-P2	Partially consistent
Objectives AIR-O1, AIR-O2, LF-FW-O10, HAZ-NH-O2, HAZ-CL-O3 Policies IM-P5, AIR-P1, AIR-P4, AIR-P6, LF-FW-P13, LF-LS-P18, ECO-P2, HAZ-NH-P1, HAZ-NH-P2, HAZ-NH-P6, HAZ-CL-P13, HAZ-CL-P14	Consistent
Regional Plan: Water for Otago (RPW)	
Objective 10A.1.1 Policy 10A.2.2	Contrary
Objective 5.3.2, 6.3.1, 6.3.2, 7.A.1, 7.A.2, 7.A.3, 9.3.3, 10.3.1 Policies 5.4.2, 6.4.10A5, 7.C.3, 7.C.4, 9.4.21, 10.4.8	Inconsistent
Policies 5.4.4, 7.B.1, 7.B.7	Partially consistent
Objective 5.3.3 Policies 5.4.1, 5.4.2A, 6.4.0A, 6.4.1A, 6.4.16, 7.B.4	Consistent
Regional Plan: Waste for Otago (RPWaste)	
Objectives 5.3.1, 5.3.2 Policy 5.4.3	Consistent
Regional Plan: Air for Otago (RPA)	
Objective 6.1.2	Partially consistent

All other relevant provisions	Consistent
Kāi Tahu ki Otago Natural Resource Management Plan 2005	
All relevant objectives and policies	Inconsistent

6.4 Section 104(1)(c) - Any other matters

6.4.1 Kāi Tahu ki Otago Natural Resource Management Plan 2005

The Kāi Tahu ki Otago Natural Resource Management Plan 2005 (**NRMP**) is considered to be a relevant other matter for the consideration of this application. This is because the regional plans have yet to be amended to take into account this Plan and this Plan expresses the attitudes and values of the four Papatipu Rūnaka: Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga.

The objectives and policies of relevance are set out and assessed in Appendix B.

6.4.3 Consideration of Alternatives

Statutory context for consideration of alternatives of relevance to this application is provided by Schedule 4 parts (6)(1)(a) and (6)(1)(d)(ii), s104(1)(c) and s105(1)(c) of the RMA, as well as by Regulation 45B(6)(b) of the NES-F.

The Applicant has had regard to the following alternatives:

1. *Mining Methodology – Open pit vs Underground*

Underground mining is considerably more technically challenging and expensive and less productive and less flexible, or scalable, than open pit mining and the average ore grade for the MGP, including MP4 is not sufficient to make underground mining of the ore body targeted by the proposed open pit extensions economically feasible. Underground mining is often used to target areas of ore body that cannot be accessed by open pit mining due to technical, environmental or economic barriers, or is used to maximise ore recovery where economic circumstances permit.

2. *Frasers Tailings Storage Facility.*

The alternatives considered by OceanaGold for Frasers TSF Stage 1 remain relevant to Stage 2. These alternatives included constructing a new TSF within the Cranky Jims or Lower Tipperary catchments. However, these options were not taken further as they would require substantial new surface disturbance which would have resulted in greater environmental effects, particularly on freshwater resources and indigenous biodiversity.

3. *Waste Rock*

As an alternative to discharging waste rock from Golden Bar pit extension to the existing Golden Bar WRS, OceanaGold considered disposing of the waste rock in the headwaters of the stream to the north of the site. This had some advantages in that the waste rock would not need to be hauled as high, therefore, resulting in lower operating costs and less visual impact. However, this option was discounted due to the greater ground disturbance and stream bed disturbance that would result from this activity. At the Coronation Pit, OceanaGold had initially considered disposing of waste rock by backfilling the C05 pit void which resulted in a much shorter waste rock haulage route. The proposal to

infill the existing Coronation North Pit void will address some pit wall instability and also has the benefit of retaining contaminants from the waste rock largely within the existing pit, considerably limiting the potential release to the environment via seepage.

7. Section 104(2A) Value of Investment

When considering an application affected by Section 124 of the Act, the Council must have regard to the value of the investment of the existing Consent Holder. The Applicant has not provided details on the value of their investment in relation to this MP4 proposal or the wider mine site, but it can safely be assumed to be significant. I do note that the majority of the activities for which consent are sought are not affected by s124.

8. Section 104(6)

Section 104(6) provides discretion for the consent authority to decline an Application on the grounds that there is inadequate information to determine the application.

(6) A consent authority may decline an application for a resource consent on the grounds that it has inadequate information to determine the application.
(7) In making an assessment on the adequacy of the information, the consent authority must have regard to whether any request made of the applicant for further information or reports resulted in further information or any report being available.

While there are matters of uncertainty that it would be helpful to resolve with additional information, particularly in relation to adverse effects on surface water and aquatic ecology, I do not consider that there is insufficient information to make a recommendation.

9. Section 104D Particular Restrictions for Non-Complying Activities

Section 104D places particular restrictions on the granting of applications for non-complying activities; consent can only be granted if council is satisfied that either the adverse effects of the activity on the environment will be minor (s104D(1)(a)), or the application is for an activity that will not be contrary to the objectives and policies of the regional plan (or any proposed regional plan) in respect of the activity (s104D(1)(b)). If both tests are failed, the application cannot be granted.

S104A(1)(a) – **fail**
The proposal will have more than minor adverse effects on terrestrial biodiversity, cultural values, surface water quality and aquatic ecology.

S104D(1)(b) – **pass**
I note that the proposal is contrary to a single objective and associated policy in the RPW relating to the duration of consent sought for takes and uses of freshwater. However, the proposal is not contrary to the objectives and policies of this plan when considered as a whole. The proposal is not contrary to any relevant objective or policy in the RPA or the RPWaste.

The granting of consent is not precluded by s104D

Otago Regional Council

10. Sections 105 and 107

10.1 Section 105

Section 105(1) states that for a discharge permit that the Consent Authority shall have regard to:

a) the nature of the discharge, the sensitivity of the receiving environment, and
b) the applicant's reasons for the proposed choice; and
c) any possible alternative methods of discharge including discharge into any other receiving environment.

The nature of the discharges and sensitivity of the various receiving environments are discussed in the application and supporting technical reports, in the s95 Report, and in this report. The Applicant has provided a thorough assessment of possible alternative methods of discharge and the possibility of discharging into any other receiving environment at Table 7.1 of the AEE. I agree that there are no practicable alternative methods of discharge, and no practicable alternative receiving environments.

Section 105(2) states:

If an application is for a resource consent for a reclamation, the consent authority must, in addition to the matters in section 104(1), consider whether an esplanade reserve or esplanade strip is appropriate and, if so, impose a condition under section 108(2)(g) on the resource consent.

The Applicant states that the proposed reclamation occurs on private land that does not facilitate public access. As such, an esplanade reserve or esplanade strip in respect of the proposed reclamations would not be appropriate and need not be imposed as a condition. I agree.

10.2 Section 107

Section 107(1)
Section 107(1) of the Act states that a discharge permit shall not be granted if, after reasonable mixing, the contaminant or water discharged is likely to give rise to all or any of the following effects in the receiving waters, either by itself or in combination with the same, similar, or other contaminants or water:

c) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended material; or
d) Any conspicuous change in the colour or visual clarity; or
e) Any emission of objectionable odour; or
f) The rendering of fresh water unsuitable for consumption by farm animals; or
g) Any significant adverse effects on aquatic life.

Dr Greer has assessed the proposed activities against the requirements in s107(1) at paragraph 5.1 of his evidence. This finds:

- MP4 is not expected to result in the production of oil or grease films, scums or foams, or floatable or suspended materials;

- MP4 is not expected to cause a conspicuous change in the colour or clarity of impacted receiving environments. While there is potential for the Murphy's silt pond to result in a conspicuous green colour in Murphys Creek due to high sulphate concentration, these colour effects cannot be attributed to the proposed activities as discharges from the Murphys silt pond to Murphys Stream are:
  i. Rare, with the silt pond being pumped back to the Frasers open pit;
  ii. Are the result of historical and current consented mining activities at Macraes;
  iii. Are not expected to increase with the implementation of MP4, with Murphys Silt Pond being treated as a sump under MP4 to capture seepage from the WRSs that will then be pumped back to the Frasers Open Pit to ensure compliance with existing water quality compliance standards.

- MP4 should not result in fresh water becoming unsuitable for consumption by farm animals as the existing and proposed compliance standards do not exceed the current ANZG stock water standards.

- The modelled effects of the proposed activity on water quality are not sufficient to cause a significant adverse effect on aquatic life. However, if fully implemented the existing and proposed compliance standards for dissolved arsenic, copper and zinc, and cyanide$_{WAD}$ would likely result in significant adverse effects on aquatic life, as they far exceed the commonly used thresholds for the onset of such effects (i.e., the ANZG 80% species protection DGVs).

As discussed in Section 6.1.2.5 of this report, I consider that the way in which the Applicant proposes to manage water quality, as evidenced by the information in the application and proposed consent conditions, is likely to result in significant adverse effects on aquatic life, and I am not satisfied that these effects can be adequately managed by the current suite of recommended consent conditions. Accordingly, I consider that the MP4 discharges in conjunction with other discharges of mining contaminants are likely to result in the effects listed in s107(1)(g). I acknowledge that there is uncertainty in this conclusion.

If further information is provided to address the uncertainties discussed in section 6.1.2.3 and to address the three suggested actions at the end of section 6.1.2.5 then an update to my assessment against s107(1) may be required.

Section 107(2)
This subsection states that a consent authority may grant a discharge permit to do something that would otherwise contravene s15 that may allow any of the effects described above in 107(1) if it is satisfied:

a) that exceptional circumstances justify the granting of the permit; or
b) that the discharge is of a temporary nature; or
c) that the discharge is associated with necessary maintenance work—
and that it is consistent with the purpose of this Act to do so.

I do not consider that there are exceptional circumstances that would justify the granting of the permits. The discharges will not be of a temporary nature, nor are they associated with necessary maintenance work. Therefore, s017(2) would not enable the granting of consent.

Section 107(2A)
A recent amendment (in force from 25 October 2024) to s107 (insertion of subsection 2A) has been made. Section 107(2A) states:

(2A)
A consent authority may grant a discharge permit or a coastal permit to do something that would otherwise contravene section 15 or 15A that may allow the effects described in subsection (1)(g) if the consent authority—

(a) is satisfied that, at the time of granting, there are already effects described in subsection (1)(g) in the receiving waters; and
(b) imposes conditions on the permit; and
(c) is satisfied that those conditions will contribute to a reduction of the effects described in subsection (1)(g) over the duration of the permit.

While the existing compliance standards provide for the effects described in subsection 1(g) to occur in receiving waters, these effects are not currently realised, as evidenced by monitoring data provided by the Applicant for the existing state of the environment. Even if the existing consented environment were considered to meet the requirements of part (a) I am not satisfied that the currently recommended consent conditions would contribute to a reduction in the effects described in subsection (1)(g) over the duration of the permit, because the MP4 proposal will result in an increase in all mining related contaminants from the existing state. Therefore, s107(2A) would not enable the granting of consent.

10.3 Summary

In summary:

- Appropriate regard has been had to the matters listed in s105(1) and s105(2).
- Granting of consent is precluded by s107(1).

11. Part 2 of the RMA

Under Section 104(1) of the RMA, a consent authority must consider resource consent applications "subject to Part 2" of the RMA, specifically, sections 5, 6, 7 and 8.

Section 5 identifies the purpose of the RMA as the sustainable management of natural and physical resources. This means managing the use of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

Sections 6, 7 and 8 outline the principles of the Act. Section 6 sets out a number of matters of national importance which need to be recognised and provided for, section 7 identifies a number of "other matters" to be given particular regard by the council, and section 8 requires the council to take into account the principles of the Treaty of Waitangi.

The Court of Appeal has clarified how to approach the assessment of "subject to Part 2" in section 104(1). In *R J Davidson* the Court of Appeal found that decision makers must consider Part 2 when making decisions on resource consent applications, where it is appropriate to do so. The extent to which Part 2 of the RMA should be referred to depends on the nature and content of the planning documents being considered.

Where the relevant planning documents have been prepared having regard to Part 2 of the RMA, and with a coherent set of policies designed to achieve clear environmental outcomes, consideration of Part 2 is not ultimately required. In this situation, the policies of these planning documents should be implemented by the consent authority. The consideration of Part 2 "would not add anything to the evaluative exercise" as "genuine consideration and application of relevant plan considerations may leave little room for Part 2 to influence the outcome". However, the consideration of Part 2 is not prevented, but Part 2 cannot be used to subvert a clearly relevant restriction or directive policy in a planning document.

Where it is unclear from the planning documents whether consent should be granted or refused, and the consent authority has to exercise a judgment, Part 2 should be considered.

I consider that it is clear that consent should be refused on the basis that the proposal will result in significant adverse effects on the environment which cannot be appropriately managed by consent conditions. Furthermore, I have assessed the proposal against each relevant national and regional policy statement, and each of the relevant regional plans and find that the proposal is generally inconsistent with the NPS-FM and the NPS-IB, generally inconsistent with P-ORPS 2021 provisions relating to freshwater and indigenous biodiversity (i.e. those provisions that give effect to the NPS-FM and NPS-IB), and generally inconsistent with the freshwater and provisions dealing with significant and highly valued natural resources, and with the specific policy providing for mineral extraction activities in the ORPS 2019.

However, the planning framework, being the NPS-FM, NPS-IB, ORPS 2019, P-ORPS 2021, RPW, RPWaste, and RPAir, does not provide a coherent set of policies designed to achieve a clear environmental outcome. Each of the documents has been introduced at a different time and with different emphasis. Furthermore, the P-ORPS 2021 remains subject to High Court appeals (one remaining freshwater provision) and Environment Court appeals (a large number of non-freshwater provisions) that have not been resolved. Accordingly, out of an abundance of caution, I have considered Part 2.

<u>Section 5</u>
The MP4 project will provide for the economic wellbeing of people and communities, as well as social wellbeing insofar as that is connected with economic wellbeing. However, I do not consider that the Applicant has demonstrated that this can be done in a manner that safeguards the life-supporting

capacity of water, soil, and ecosystems, nor that adverse effects can be adequately avoided, remedied, or mitigated. As such, I do not consider that the MP4 proposal is consistent with the purpose of the Act.

Section 6
Matters of national importance of particular relevance to this application are:

(c) the protection of areas of significant indigenous vegetation and significant habitats of indigenous fauna:

(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga.

The Applicant has identified areas that meet significance criteria for significant indigenous vegetation; however, these areas are not able to be protected. The relationship of Māori and their culture and traditions is recognised but after considering the CIA and the submission from Kā Rūnaka, I do not consider that this relationship has been adequately provided for.

Section 7
I agree that the proposal has had particular regard to the relevant matters listed in Section 7.

Section 8
I agree that the Applicant is not a "person exercising functions and powers" under the RMA. Nonetheless, the Applicant has commissioned a CIA in relation to the proposal and has stated that they intend to address matters in consultation with mana whenua.

In my opinion, the proposal does not achieve the purpose and principles of Part 2.

12. Section 108 and 108AA of the RMA

Should the decision maker choose to grant the application, the conditions attached as Appendix C are recommended in accordance with Sections 108 and 108AA of the Act.

These comprise the Applicant's proposed consent conditions (version April 2025) as well as the recommended conditions as set out in the expert evidence in Appendices D-H. I reiterate that I do not consider that these conditions are sufficient to manage the adverse effects of the proposal.

13. Recommendation

Under s104B it is recommended that this consent application be **declined in full** for the following reasons:

- In accordance with the assessment under s104(1)(a) and s104(1)(ab), the proposal will result in actual and potential effects on surface water quality, aquatic ecology, natural inland wetlands and ephemeral wetlands, lizard habitat, and a threatened invertebrate species that are significantly adverse and cannot be avoided, minimised, remedied, offset, or compensated for. The proposal will also have significant adverse cumulative effects on cultural values, and it is not yet known if these can be managed by conditions.

- In relation to s104(1)(b), the following activities must be avoided, in accordance with the effects management hierarchy prescribed in the NPS-IB:

    - The Coronation Stage 6 Pit Extension (effects on rock tors and ephemeral wetlands)
    - The Golden Bar Stage 2 Pit Extension (effects on rock tors)
    - The Golden Bar WRS Extension (effects on rock tors and threatened moth)
    - The Innes Mills Stage 10 Extension (effects on natural inland wetlands)

- The granting of consents for vegetation clearance and earthworks within natural inland wetlands (ephemeral wetlands) in the Coronation Area is precluded by NES-F regulation 45D(6).

- The granting of consents for vegetation clearance and earthworks within natural inland wetlands in the Innes Mills Area is precluded by NES-F regulation 45D(6).

- In relation to s104(b), the proposal is considered to be inconsistent with the NPS-FM, NPS-IB, the freshwater and indigenous biodiversity provisions of the ORPS 2019 and the P-ORPS 2021.

- Granting of consent is precluded by s107(1).

- The proposal is inconsistent with Part 2 of the Act.

14. Term of Consent (s123)

Should the Commissioners be minded to grant the application, I note that I am generally satisfied with the consent terms requested by the Applicant, with the exception of the term requested for the taking and use of surface water or groundwater, for which I recommend a six-year term as directed by RPW policy 10A.2.2.

In my opinion, it is important to ensure that future rounds of consenting are able to consider all the relevant activities that contribute to the effects on the environment, without that assessment being limited by other enduring resource consents. For this reason, I support the request to align the consent terms of these MP4 applications with the consent terms imposed for other activities within the same mining area. I acknowledge that my recommendation for a six-year term for water permits is inconsistent with this; however, I consider that policy 10A.2.2 is directive as to the consent term that must be imposed.

Appendix A: Legal Descriptions

Appendix B: Policy Assessment

Appendix C: Recommended Consent Conditions

- Appendix C1 – RM24.184 Air Discharge Permits ORC Changes 9 June 2025
- Appendix C2 – RM24.184 Coronation North Consents ORC Changes 9 June 2025
- Appendix C3 – RM24.184 Coronation Consents ORC Changes 9 June 2025
- Appendix C4 – RM24.184 Frasers TSF and Innes Mills Consents ORC Changes 9 June 2025
- Appendix C5 – RM24.184 Golden Bar Consents ORC Changes 9 June 2025
- Appendix C6 – RM24.184 Golden Bar Pit and Waste Rock Stack Compliance and Monitoring Schedule ORC Changes 9 June 2025
- Appendix C7 – RM24.184 Miscellaneous Consents ORC Changes 9 June 2025

Appendix D: Evidence of Colin Macdiarmid

Appendix E: Evidence of Alexandra Badenhop

Appendix F: Evidence of Michael Greer

Otago Regional Council

Appendix G: Evidence of Glenn Davis

Appendix H: Evidence of John Iseli