

17 STUDY TEAM

The following people have contributed to writing sections of this EIS.

Table 17-1. Study team & section contributors

SECTION	SIGNIFICANT CONTRIBUTOR(S)
Executive Summary	David Gwyther Michael Clarke
1. Introduction	Michael Clarke
2. Legal & Regulatory Framework, Policy, Standards & Guidelines	Rob Milbourne
3. Project Description	Jon Machin
4. Impact Assessment Methods.	Michael Clarke David Gwyther
5. Physicochemical Environment	Michael Clarke David Gwyther
6. Biological Environment	Leigh Marsh
7. Physicochemical Environmental Impacts	Michael Clarke David Gwyther
8. Biological Environmental Impacts	Leigh Marsh Michael Clarke
9. Hazards, Mitigation & Emergency Response Plan	Tony O'Sullivan
10. Risk Prioritization	Multiple
11. Cumulative Impacts	Multiple
12. Environmental Management, Monitoring & Reporting	Michael Clarke
13. Limitations, Assumptions & Uncertainty	Multiple
14. Consultation & Review	Corey McLachlan
15. Conclusions & Recommendations	Multiple
16. Glossary & Abbreviations	N/A
17. Study Team	N/A
18. References	N/A
19. Appendices	N/A

Certificates of qualification are provided below.

In addition, this report has been reviewed by an independent Certified Impact Assessor (Environmental Institute of Australia & New Zealand) who has provided a statement stating that the methods and processes used in this EIA are consistent with international good industry practice.

Michael Clarke
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CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled "ENVIRONMENTAL IMPACT STATEMENT (EIS) Testing of polymetallic nodule collector system components in the NORI-D license area, Clarion-Clipperton Zone, Pacific Ocean", dated June 2021.

I, Michael Clarke, do hereby certify that:

I am a graduate from the University of Texas, USA, with a PhD in Environmental Sciences in 1998.

I have continually practiced my profession since my graduation from university in 1998.

I am a certified as an Environmental Practitioner and Impact Assessment Specialist by the Environmental Institute of Australia and New Zealand.

I have 25 years of environmental management experience, including 15 years of environmental impact assessment experience for the mining, resources, and energy sectors.

I visited the Clarion Clipperton Zone on NORI research Campaign 5A (16/10/20 – 30/12/20) and I can confirm that the operations witnessed during that campaign are as described in this report.

I am a full-time employee of The Metals Company in the role of Environmental Manager.

I have made a significant contribution to the following sections of the report:

1. Introduction
4. Impact Assessment methods
5. Physico-chemical Environment
7. Physico-chemical Environmental Impacts
8. Biological Environmental Impacts
10. Environmental Management, Monitoring & Reporting
12. Conclusions & Recommendations

I confirm that, as of the date of this Certificate, to the best of my knowledge, information and belief, the scientific and technical information contained in this report is correct and not misleading.

Dated 30 June 2021

Signature Withheld

Dr. Michael Clarke



Anthony O'Sullivan
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Vancouver, BC V6C 2T5

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CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled "ENVIRONMENTAL IMPACT STATEMENT (EIS) Testing of polymetallic nodule collector system components in the NORI-D license area, Clarion-Clipperton Zone, Pacific Ocean", dated June 2021.

I, Anthony Paul O'Sullivan, do hereby certify that:

I am a graduate from the University of Western Australia, WA, with an MSc and BSc (hons) in 1987 and 2001.

I have continually practiced my profession since my graduation from university in 1987.

I am a fellow of the Australian Institute of Mining and Metallurgy and am a fellow of the Society of Economic Geologists.

I have 30 years of experience in all facets of the mining industry both onshore and offshore holding executive positions in the world's largest mining company, BHP and a number of mining and technology start-up companies.

I am a full-time employee of The Metals Company in the role of Chief Development Officer.

I have made a significant contribution to the following section of the report:

9. Hazards, Mitigation & Emergency Response Plan

I confirm that, as of the date of this Certificate, to the best of my knowledge, information and belief, the scientific and technical information contained in this report is correct and not misleading.

Signature Withheld

Dated 30 June 2021

Anthony O'Sullivan

Fellow AusImm

Fellow SEG

David Gwyther
Picton House
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CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled "ENVIRONMENTAL IMPACT STATEMENT (EIS) Testing of polymetallic nodule collector system components in the NORI-D license area, Clarion-Clipperton Zone, Pacific Ocean", dated June 2021.

I, David Gwyther, do hereby certify that:

I am a graduate from the University of Wales (Bangor), with a PhD in marine sciences in 1978.

I have continually practiced my profession in marine and environmental science since my graduation university.

I have 41 years experience of environmental impact assessment for over 20 major projects in mining, petroleum and infrastructure sectors, through all phases of baseline studies to long term monitoring.

I was Project Director and lead author of the EIS for Solwara-1 Project, approved in December 2009, and manager of (or adviser to) marine environmental assessments of seven other projects in Papua New Guinea and Indonesia, proposing deep sea disposal of mine tailings.

I was a team member conducting audits of environmental performance of mines and smelters in the Zambian Copperbelt, Australia, Papua New Guinea and West Papua (Indonesia).

I confirm that, as of the date of this Certificate, to the best of my knowledge, information and belief, this report contains all scientific and technical information that is required to be disclosed to make this report not misleading.

I am Director of my own company, Picton Group Pty Ltd, formed in 2012

I am a member of the Society for Mining, Metallurgy & Exploration, and the International Marine Minerals Society

Dated 01 June 2021

Signature Withheld

Dr. David Gwyther

Leigh Marsh
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CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled "ENVIRONMENTAL IMPACT STATEMENT (EIS) Testing of polymetallic nodule collector system components in the NORI-D license area, Clarion-Clipperton Zone, Pacific Ocean", dated June 2021.

I, Leigh Marsh, do hereby certify that:

I am a graduate from the University of Southampton with a Master of Oceanography and a PhD in deep-sea ecology in 2005 and 2013.

I have continually practiced my profession since my graduation.

I have 16 years of professional experience in marine ecology including eight years specialising in deep-sea research.

I am a contractor working on behalf of The Metals Company.

I have made a significant contribution to the following section(s) of the report:

6. Biological Environment

8. Biological Environmental Impacts

I confirm that, as of the date of this Certificate, to the best of my knowledge, information and belief, the scientific and technical information contained in this report is correct and not misleading.

Dated 30 June 2021

Signature Withheld

Dr. Leigh Marsh

Jon Machin
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CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled "ENVIRONMENTAL IMPACT STATEMENT (EIS) Testing of polymetallic nodule collector system components in the NORI-D license area, Clarion-Clipperton Zone, Pacific Ocean", dated June 2021.

I, Michael Clarke, do hereby certify that:

I am a graduate from University of Oxford with a Master of Arts in Engineering Science in 1987.
I have continually practiced my profession since my graduation.
I am a Member of the Institution of Civil Engineers, Chartered Engineer, in the United Kingdom.
I am a Member of the Society of Petroleum Engineers.
I have 30 years of professional experience in offshore and coastal engineering including over 20 years in deep water energy and minerals industries.
I am a full-time employee of The Metals Company in the role of Head of Offshore Engineering.
I have made a significant contribution to the following section(s) of the report:

3. Project Description

I confirm that, as of the date of this Certificate, to the best of my knowledge, information and belief, the scientific and technical information contained in this report is correct and not misleading.

Signature Withheld

Dated 30 June 2021

Jon Machin

Corey McLachlan
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CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled "ENVIRONMENTAL IMPACT STATEMENT (EIS) Testing of polymetallic nodule collector system components in the NORI-D license area, Clarion-Clipperton Zone, Pacific Ocean", dated June 2021.

I, Corey McLachlan, do hereby certify that:

I am a graduate from the University of Bristol with a Master of Arts in International Relations in 2005.

I have continually practiced my profession since my graduation.

I have 20 years' experience professional experience, 10 years of community, social performance and stakeholder engagement experience within the metals and minerals sector.

I am a full-time employee of The Metals Company in the role of Head of Stakeholder Engagement.

I have made a significant contribution to the following section(s) of the report:

11. Consultation and Review

I confirm that, as of the date of this Certificate, to the best of my knowledge, information and belief, the scientific and technical information contained in this report is correct and not misleading.

Dated 30 June 2021

Signature Withheld

Corey McLachlan

Robert Milbourne
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CERTIFICATE OF QUALIFIED PERSON

To accompany the report entitled "ENVIRONMENTAL IMPACT STATEMENT (EIS) Testing of polymetallic nodule collector system components in the NORI-D license area, Clarion-Clipperton Zone, Pacific Ocean", dated June 2021.

I, Robert Milbourne, do hereby certify that:

I am a graduate from Duke University School of Law, USA, with a Juris Doctorate in 1999.

I have continually practiced my profession since my graduation from university in 1999.

I have been admitted to practice law in New York and the District of Columbia and as a Foreign Registered lawyer in Australia and Brazil.

I have 20 years of experience in legal issues involving international projects in the mining, resources, and energy sectors.

I am an adjunct professor of law at the University of Queensland where I have taught International and Comparative Mining and Natural Resources Law.

I consult to DeepGreen Metals through the consulting firm Mining Standards International.

I have advised DeepGreen with respect its EIS and the section entitled "Legal & Regulatory Framework, Policy, Standards & Guidelines".

I confirm that, as of the date of this Certificate, to the best of my knowledge, information and belief, the scientific and technical information contained in this report is correct and not misleading.

Dated 30 June 2021

Signature Withheld

Robert Milbourne

29th June 2021



Michael Clarke
Environmental Manager
The Metals Company
595 Howe Street
Vancouver, British Columbia
V6C2T5 Canada

COLLECTOR TEST ENVIRONMENTAL IMPACT STATEMENT – ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT PROCESS REVIEW

Michael,

Star Environmental Pty Ltd (Star) has been engaged by Nauru Ocean Resources Inc. (NORI), a subsidiary of The Metals Company, to provide an expert technical environmental assessment process review for the project to test polymetallic nodule collector system components in the NORI-D license area, Clarion-Clipperton Zone, north Pacific Ocean.

Scope of Work

The scope of work of the review is to:

- Conduct a review of the Draft Nori Collector Test Environmental Impact Statement (EIS) report (Version 3, dated June 2021).
- Provide comment regarding the adequacy of the Environmental and Social Impact Assessment (ESIA) process within the EIS report to address the objectives and purpose of the EIS and meet requirements for the International Seabed Authority (ISA) and international good industry practice for ESIA; and
- Provide a response letter and 'Certificate of Qualified Person' statement whether the EIS is adequate for its purpose, signed by the Managing Director and Principal Environmental Consultant of Star, Lochlan Gibson, as a Certified Environmental Practitioner (Impact Assessment) Specialist of the Environment Institute of Australia and New Zealand (EIANZ).

Qualifications of Reviewer

Lochlan Gibson has over 26 years of leadership and technical experience specialising in approvals and ESIA in the energy, resources and infrastructure industries. He has unique experience of leading technical teams (environment and engineering) for major projects through during the planning, design, construction and operational phases. He has completed over 40 ESIAs and 60 Environmental Management Plans (EMP's) for projects in Australia, United States of America, Canada, Trinidad, Qatar, Vanuatu, Laos, Kiribati, Papua New Guinea, Saudi Arabia and Indonesia. He is one of only 30 people in Australia and New Zealand certified to the EIANZ as an ESIA specialist.

Some project examples include:

- Project Manager and SESA Author –Responsible for Strategic Environmental and Social Assessment (SESA) for the mining industry in the Peoples Democratic Republic of Laos, including mine site inspections, community consultation with villages located adjacent to mine sites, GIS data analysis, current and recommended legislative review and workshops with Laos Government. The SESA

assessed the environmental, social and economic sustainability of the mining sector across exploration, operations and closure with direct inputs to the 20-year mining strategic plan for Laos, Department of Mines and Energy, funded by The World Bank.

- Project Manager and EIS Author - Responsible for delivery of ESIA for (Vanuatu), including potential 10 MW power plant, exploration and production drilling, steamfield and potential seawater cooling with marine pipeline and water supply pipelines, Geodynamics.
- Project Director and EIS Author – Environment and Social - Responsible for the delivery of the EIS (State and Commonwealth), stakeholder consultation, including Sustainable Development Plan, Approvals Strategy, EIS, EMPs (Construction), EPBC Referral, EIS field studies and Socio-Economic Study with the Wik and Wik Way native title claimants and first Australians, Chalco (China Aluminium)
- Project Manager and EIS Author - Responsible for delivery of an ESIA for offshore oil exploration project. ESIA studies included baseline studies, stakeholder and community consultation, impact assessment, risk assessments and ESIA management and monitoring plan, Palau Energy.
- Environmental Manager - Responsible for all oil and gas exploration within Australia, including writing over 20 EIS's and EMPs for offshore drilling and seismic surveys, auditing and training of personnel offshore, Woodside Energy, including:
 - Exploration drilling and seismic surveys in Otway Basin, North-West Shelf, Bonaparte Basin and Timor Sea offshore Australia;
 - Blue-whale surveys to meet Commonwealth Conditions for exploration drilling; and
 - Offshore auditing and training of all drilling and seismic contractors.
- Principal Environmental Adviser – Responsible for all producing offshore facilities in Australia (north-west shelf and Timor Sea), including Environmental surveys, HSE Cases for approval, oil spill contingency, approvals through regulator and inspections offshore, Woodside Energy.

Review Comments

A review of the methodology and process in the EIS finds the following technical comments:

- Impact Assessment Methods (Section 4):
 - Basis of method is assessing if the impacts associated with the collector can be considered adverse, significant or likely. The method is relevant and logical for impacts as it uses the existing environment of Valued Ecological Communities (VECs) to compare against the level of the impact. Assessing whether the impact is adverse, significant or likely to the VEC ensures all aspects of the impacts are considered and can be qualified to compare impacts;
 - There is an important distinction between assessing a planned activity of the collector that will cause impacts against the risk of an unplanned activity assessing the likelihood and consequence of that risk as addressed in Section 9. The assessment of impacts must have a tailored method for impacts of a planned activity, and this EIS method uses good industry practice; and
 - The EIS uses a 'leopold matrix' to provide a filtering tool of the planned activities by the environmental efforts to VECs. This is effectively a scoping method to ensure the focus is on the more significant impacts, and this EIS method uses good industry practice.
- Impact minimisation through planning, using mitigation measures to reduce the impacts and then assess the residual impacts (Section 7 and 8):
 - The EIS considers the addition of mitigation measures for each planned activity and then shows the residual impact. A score system is used to rank the significance levels as residual; and the impact minimisation system uses good industry practice.
- Major hazards, mitigation and emergency response plan (Section 9):
 - Basis of method for assessing hazards and risks is the traditional of assessment of the hazard / risk then consider the likelihood of the risk occurring and the consequence of impacts

Testing of Polymetallic Nodule Collector System EIS –Environmental and Social Impact Assessment Process Review

following the unplanned activity, as opposed to the planned activity method of impacts in Section 4.

- o The Hazard Identification Risk Assessment (HIRA) process flowchart is a sound method for deciding whether the mitigation measures proposed will manage risks to As Low As Reasonably Practical (ALARP); and
- o The EIS hazard / risk process uses good industry practice.
- Environmental monitoring and management and reporting (Section 10):
 - o The EIS describes the method and process for how the impacts will be managed, monitored and reported, which is considered good industry practice.

Overall, the EIS methodology and processes are consistent with international good industry practice.

CERTIFICATE OF QUALIFIED PERSON

For the report entitled "Environmental Impact Statement (EIS) Testing of polymetallic nodule collector system components in the NORI-D license area", Clarion-Clipperton Zone, Pacific Ocean, Version 3, dated June 2021.

I, Lochlan Gibson, do hereby certify that:

- I am a graduate from the Griffith University, majoring in environmental sciences in 1995.
- I have continually practiced my profession in environmental science since my graduation at university.
- I have 26 years' experience of environmental and social impact assessment for over 40 major projects in energy, resources, petroleum and infrastructure sectors, through all phases of planning, design, construction and operations.
- I have led and managed environmental, planning and engineering design consulting businesses with over 200 staff and up to \$30M annual revenue.
- I have completed environmental studies in countries such as Australia, United States of America, Canada, Trinidad, Qatar, Vanuatu, Laos, Kiribati, Papua New Guinea, Saudi Arabia and Indonesia.
- I am Managing Director and Principal Environmental Consultant of Star Environmental Pty Ltd.
- I am a Certified Environmental Practitioner (CEnvP), Impact Assessment Specialist of the Environmental Institute of Australia and New Zealand.
- I am a Certified Project Director of the Australian Institute of Project Managers.
- I confirm that, as of the date of this letter, to the best of my knowledge, information and belief, the scientific and technical ESIA process contained in this report is good international industry practice and appropriate for a project of this scale and intensity.

Yours sincerely

Signature Withheld

Lochlan Gibson
Managing Director, Principal Environmental Consultant
STAR Environmental

