



Chapter 2

Viability and Purpose of the Project

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This Environmental Impact Statement, including the Executive Summary, and all chapters of and attachments and appendices to it and all drawings, plans, models, designs, specifications, reports, photographs, surveys, calculations and other data and information in any format contained and/or referenced in it, is together with this disclaimer referred to as the “EIS”.

Purpose of EIS

The EIS has been prepared by, for and on behalf of Wafi Mining Limited and Newcrest PNG 2 Limited (together the “**WGJV Participants**”), being the participants in the Wafi-Golpu Joint Venture (“**WGJV**”) and the registered holders of exploration licences EL 440 and EL1105, for the sole purpose of an application (the “**Permit Application**”) by them for environmental approval under the Environment Act 2000 (the “**Act**”) for the proposed construction, operation and (ultimately) closure of an underground copper-gold mine and associated ore processing, concentrate transport and handling, power generation, water and tailings management, and related support facilities and services (the “**Project**”) in Morobe Province, Independent State of Papua New Guinea. The EIS was prepared with input from consultants engaged by the WGJV Participants and/or their related bodies corporate (“**Consultants**”).

The Permit Application is to be lodged with the Conservation and Environment Protection Authority (“**CEPA**”), Independent State of Papua New Guinea.

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Development of Project subject to Approvals, Further Studies and Market and Operating Conditions

Any future development of the Project is subject to further studies, completion of statutory processes, receipt of all necessary or desirable Papua New Guinea Government and WGJV Participant approvals, and market and operating conditions.

Engineering design and other studies are continuing and aspects of the proposed Project design and timetable may change.

NEWCREST MINING LIMITED DISCLAIMER

Newcrest Mining Limited (“**Newcrest**”) is the ultimate holding company of Newcrest PNG 2 Limited and any reference below to “Newcrest” or the “Company” includes both Newcrest Mining Limited and Newcrest PNG 2 Limited.

Forward Looking Statements

The EIS includes forward looking statements. Forward looking statements can generally be identified by the use of words such as “may”, “will”, “expect”, “intend”, “plan”, “estimate”, “anticipate”, “continue”, “outlook” and “guidance”, or other similar words and may include, without limitation, statements regarding plans, strategies and objectives of management, anticipated production or construction commencement dates and expected costs or production outputs. The Company continues to distinguish between outlook and guidance. Guidance statements relate to the current financial year. Outlook statements relate to years subsequent to the current financial year.

Forward looking statements inherently involve known and unknown risks, uncertainties and other factors that may cause the Company’s actual results, performance and achievements to differ materially from statements in this EIS. Relevant factors may include, but are not limited to, changes in commodity prices, foreign exchange fluctuations and general economic conditions, increased costs and demand for production inputs, the speculative nature of exploration and project development, including the risks of obtaining necessary licences and permits and diminishing quantities or grades of reserves, political and social risks, changes to the regulatory framework within which the Company operates or may in the future operate, environmental conditions including extreme weather conditions, recruitment and retention of personnel, industrial relations issues and litigation.

Forward looking statements are based on the Company’s good faith assumptions as to the financial, market, regulatory and other relevant environments that will exist and affect the Company’s business and operations in the future.

The Company does not give any assurance that the assumptions will prove to be correct. There may be other factors that could cause actual results or events not to be as anticipated, and many events are beyond the reasonable control of the Company. Readers are cautioned not to place undue reliance on forward looking statements. Forward looking statements in the EIS speak only at the date of issue. Except as required by applicable laws or regulations, the Company does not undertake any obligation to publicly update or revise any of the forward looking statements or to advise of any change in assumptions on which any such statement is based.

Non-IFRS Financial Information

Newcrest results are reported under International Financial Reporting Standards (IFRS) including EBIT and EBITDA. The EIS also includes non-IFRS information including Underlying profit (profit after tax before significant items attributable to owners of the parent company), All-In Sustaining Cost (determined in accordance with the World Gold Council Guidance Note on Non-GAAP Metrics released June 2013), AISC Margin (realised gold price less AISC per ounce sold (where expressed as USD), or realised gold price less AISC per ounce sold divided by realised gold price (where expressed as a %), Interest Coverage Ratio (EBITDA/Interest payable for the relevant period), Free cash flow (cash flow from operating activities less cash flow related to investing activities), EBITDA margin (EBITDA expressed as a percentage of revenue) and EBIT margin (EBIT expressed as a percentage of revenue). These measures are used internally by Management to assess the performance of the business and make decisions on the allocation of resources and are included in the EIS to provide greater understanding of the underlying performance of Newcrest's operations. The non-IFRS information has not been subject to audit or review by Newcrest's external auditor and should be used in addition to IFRS information.

Ore Reserves and Mineral Resources Reporting Requirements

As an Australian Company with securities listed on the Australian Securities Exchange (ASX), Newcrest is subject to Australian disclosure requirements and standards, including the requirements of the Corporations Act 2001 and the ASX. Investors should note that it is a requirement of the ASX listing rules that the reporting of Ore Reserves and Mineral Resources in Australia comply with the 2012 Edition of the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC Code) and that Newcrest's Ore Reserve and Mineral Resource estimates comply with the JORC Code.

Competent Person's Statement

The information in the EIS that relates to Golpu Ore Reserves is based on information compiled by the Competent Person, Mr Pasqualino Manca, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Pasqualino Manca, is a full-time employee of Newcrest Mining Limited or its relevant subsidiaries, holds options and/or shares in Newcrest Mining Limited and is entitled to participate in Newcrest's executive equity long term incentive plan, details of which are included in Newcrest's 2017 Remuneration Report. Ore Reserve growth is one of the performance measures under recent long term incentive plans. Mr Pasqualino Manca has sufficient experience which is relevant to the styles of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code 2012. Mr Pasqualino Manca consents to the inclusion of material of the matters based on his information in the form and context in which it appears.

HARMONY GOLD MINING COMPANY LIMITED DISCLAIMER

Harmony Gold Mining Company Limited ("Harmony") is the ultimate holding company of Wafi Mining Limited and any reference below to "Harmony" or the "Company" includes both Harmony Gold Mining Company Limited and Wafi Mining Limited.

Forward Looking Statements

These materials contain forward-looking statements within the meaning of the safe harbor provided by Section 21E of the Securities Exchange Act of 1934, as amended, and Section 27A of the Securities Act of 1933, as amended, with respect to our financial condition, results of operations, business strategies, operating efficiencies, competitive positions, growth opportunities for existing services, plans and objectives of

management, markets for stock and other matters. These include all statements other than statements of historical fact, including, without limitation, any statements preceded by, followed by, or that include the words "targets", "believes", "expects", "aims", "intends", "will", "may", "anticipates", "would", "should", "could", "estimates", "forecast", "predict", "continue" or similar expressions or the negative thereof.

These forward-looking statements, including, among others, those relating to our future business prospects, revenues and income, wherever they may occur in this EIS and the exhibits to this EIS, are essentially estimates reflecting the best judgment of our senior management and involve a number of risks and uncertainties that could cause actual results to differ materially from those suggested by the forward-looking statements. As a consequence, these forward-looking statements should be considered in light of various important factors, including those set forth in these materials. Important factors that could cause actual results to differ materially from estimates or projections contained in the forward-looking statements include, without limitation: overall economic and business conditions in South Africa, Papua New Guinea, Australia and elsewhere, estimates of future earnings, and the sensitivity of earnings to the gold and other metals prices, estimates of future gold and other metals production and sales, estimates of future cash costs, estimates of future cash flows, and the sensitivity of cash flows to the gold and other metals prices, statements regarding future debt repayments, estimates of future capital expenditures, the success of our business strategy, development activities and other initiatives, estimates of reserves statements regarding future exploration results and the replacement of reserves, the ability to achieve anticipated efficiencies and other cost savings in connection with past and future acquisitions, fluctuations in the market price of gold, the occurrence of hazards associated with underground and surface gold mining, the occurrence of labour disruptions, power cost increases as well as power stoppages, fluctuations and usage constraints, supply chain shortages and increases in the prices of production imports, availability, terms and deployment of capital, changes in government regulation, particularly mining rights and environmental regulation, fluctuations in exchange rates, the adequacy of the Group's insurance coverage and socio-economic or political instability in South Africa and Papua New Guinea and other countries in which we operate.

For a more detailed discussion of such risks and other factors (such as availability of credit or other sources of financing), see the Company's latest Integrated Annual Report and Form 20-F which is on file with the Securities and Exchange Commission, as well as the Company's other Securities and Exchange Commission filings. The Company undertakes no obligation to update publicly or release any revisions to these forward-looking statements to reflect events or circumstances after the date of this EIS or to reflect the occurrence of unanticipated events, except as required by law.

Competent Person's Statement

The Wafi-Golpu Joint Venture is an unincorporated joint venture between a wholly-owned subsidiary of Harmony Gold Mining Company Limited and a wholly-owned subsidiary of Newcrest Mining Limited.

The information in the EIS that relates to Golpu Ore Reserves is based on information compiled by the Competent Person, Mr Pasqualino Manca, who is a member of The Australasian Institute of Mining and Metallurgy. Mr Pasqualino Manca, is a full-time employee of Newcrest Mining Limited or its relevant subsidiaries, holds options and/or shares in Newcrest Mining Limited and is entitled to participate in Newcrest's executive equity long term incentive plan, details of which are included in Newcrest's 2017 Remuneration Report. Ore Reserve growth is one of the performance measures under recent long term incentive plans. Mr Pasqualino Manca has sufficient experience which is relevant to the styles of mineralisation and type of deposit under consideration and to the activity which he is undertaking to qualify as a Competent Person as defined in the JORC Code 2012. Mr Pasqualino Manca consents to the inclusion of material of the matters based on his information in the form and context in which it appears.

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2. VIABILITY AND PURPOSE OF THE PROJECT

Any development of the Wafi-Golpu Project (the Project) remains subject to further studies and the completion of statutory processes and approvals of both the Independent State of Papua New Guinea (PNG) and the WGJV Participants (Wafi Mining Limited and Newcrest PNG 2 Limited).

Thereafter, the conduct of Project activities and the viability of the Project throughout its life depends on the ability of the WGJV Participants to respond successfully to a range of external factors, including possible changes to the legislative and fiscal regime, technical and operational challenges, and varying commodity prices and exchange rates.

This chapter outlines the technical expertise and resources of the WGJV Participants, the various studies completed to inform the design, construction and operation of the Project, and the Project's consistency with the national development policies of the State of PNG.

2.1. Proponent's Technical Expertise and Resources

As described in Chapter 1, Introduction the ultimate holding companies of the WGJV Participants are Harmony Gold Mining Limited (Harmony) in the case of Wafi Mining Limited, and Newcrest Mining Limited (Newcrest) in the case of Newcrest PNG 2 Limited. Harmony and Newcrest both have successful mining operations in several countries, with commensurate resources and capabilities.

Harmony is a world-class gold mining and exploration company. It has more than 65 years' experience in the industry and is the second largest gold producer in South Africa. The company's primary stock exchange listing is on the Johannesburg Stock Exchange, with a secondary listing on the New York Stock Exchange. Harmony has operations and assets in South Africa and PNG. In South Africa, Harmony operates ten underground mines, one open pit operation and several surface sources. Harmony's interests in PNG include the Hidden Valley gold mine (Harmony 100%); the Wafi-Golpu Joint Venture (Harmony 50%), and various exploration projects.

Newcrest is the largest gold producer listed on the Australian Securities Exchange. The company owns and operates a portfolio of predominantly low-cost, long-life mines in PNG (Lihir), Australia (Cadia Valley, New South Wales and Telfer, Western Australia) and Indonesia (Gosowong), and has a strong pipeline of brownfield and greenfield exploration projects.

Newcrest's asset portfolio includes operating mines that use a variety of mining methods for large orebodies, together with selective underground mining methods to optimise high-grade epithermal deposits. This includes, for example, the block cave method as part of its Cadia Valley Operations near the city of Orange in central New South Wales, Australia.

In addition to the collective skill and experience brought to the Wafi-Golpu Joint Venture (WGJV) team from Harmony and Newcrest, a number of specialist consultants have been engaged by the WGJV to provide assistance in delivering the Project including in relation to deep sea tailings placement (DSTP) systems and environmental studies in relation to them.

2.2. Project Viability

2.2.1. Concept, Pre-Feasibility and Feasibility Studies

The Project is the result of an extensive program of exploration and study.

Mineral exploration by CRA Exploration Limited began in the Wafi-Golpu area in the late 1970s. In 1980, exploration licence (EL) 440 was granted to Wafi Mining Limited, but it was not until 1990 that a drillhole intersected the Golpu mineralisation. In 1997, the high-grade Link Zone was discovered.

A succession of companies continued exploration in the Wafi-Golpu area, including Elders, Aurora Gold and (by merger in 2003) Abelle Limited. Harmony Gold Mining Company Ltd assumed control of the Wafi-Golpu resource by way its acquisition of Abelle Limited in 2004, and exploration drilling recommenced in 2005.

In 2005, Wafi Mining Limited completed a Pre-Feasibility Study for development of the Wafi-Golpu and Link Zone deposits.

In 2008, the WGJV was formed between Wafi Mining Limited and Newcrest PNG 2 Limited. Deep drilling conducted by the WGJV since 2009 identified a world-class porphyry deposit at Wafi-Golpu suited to bulk underground mining methods.

There have been a number of studies aimed at advancing technical and commercial assessment of the Golpu deposit. The key studies are listed in Table 2.1.

Table 2.1: Wafi-Golpu Project studies

Year	Study Type	Licence Holder	Deposit
2005	Pre-Feasibility Study	Wafi Mining Limited (Harmony)	Wafi-Golpu and Link Zone
2009	Concept Study	WGJV Participants	Expanded Wafi-Golpu resource
2012	Pre-Feasibility Study	WGJV Participants	Expanded Golpu mineral resource
2014	Pre-Feasibility Optimisation Study	WGJV Participants	Golpu resource
2016	Pre-Feasibility Study	WGJV Participants	Golpu resource
2016	Feasibility Study	WGJV Participants	Golpu resource
2018	Feasibility Study Update	WGJV Participants	Golpu resource

Various approaches to development (including different mining methods and infrastructure configurations) have been considered for the Wafi-Golpu deposit. These have been successful in more accurately delineating the orebody and confirming mining by underground mining methods, however, further work was required to refine and improve the economic viability of the Project.

In 2014, the Pre-Feasibility Optimisation Study developed a staged block cave mining configuration which proposed commencing mining at a production rate of 3 million tonnes per annum (Mtpa) and ramping up to 6Mtpa. Following this, the WGJV completed a Feasibility Study in 2016 for the same production rate, as well as a Pre-Feasibility in 2016 for an increased processing rate. The Feasibility Study sought to optimise the proposed location and design of various infrastructure based on the results of ongoing engineering, geotechnical, environmental, social and cultural heritage studies. A Feasibility Study Update was prepared in 2018 to account for further data collection and studies (including DSTP studies) and design work including in-house power generation, new production rate (design capacity of 16.84Mtpa), new block cave configuration, a new location for the Port Facilities Area and a DSTP system. It is anticipated that the mine life from first production of the processing plant (excluding construction and closure phases) will be approximately

28 years (estimated to be approximately 40 years including development and closure). The Project configuration will continue to be refined as the Project progresses to financial investment decision, construction and operation.

The suite of environmental, social and cultural heritage studies completed in support of concept, pre-feasibility and feasibility studies have iteratively informed the assessment of alternatives and influenced Project design. Further details of this process are provided in Chapter 7, Assessment of Alternatives. The findings of these studies have also been used to inform environmental, social and cultural heritage baseline characterisation and the assessment of impacts presented in this environmental impact statement (EIS).

The Feasibility Study Update (WGJV, 2018) represents the current design and a viable basis for the Project from financial, environmental, social and cultural heritage perspectives.

2.2.2. Ore Reserve

The Golpu deposit's JORC-compliant (JORC, 2012) Ore Reserve is estimated (March 2018) as 400Mt at 0.86g/t gold and 1.2% copper containing 11 million troy ounces (Moz) gold and 5Mt of contained copper¹.

2.2.3. Wafi-Golpu Joint Venture Objectives

The WGJV intend to deliver a mining operation that is safe and sustainable, and delivers value to stakeholders. This will be achieved by building and operating an underground mine, associated ore processing facilities, support services and infrastructure, while managing potential adverse impacts on environmental, social and cultural heritage values. The Project will be consistent with:

- State of PNG regulatory requirements
- WGJV policies and standards

The WGJV policies and standards have been informed by international standards, including the International Council on Mining and Metals (ICMM) Sustainable Development Framework (ICMM, 2015), the International Finance Corporation (IFC) Performance Standards on Social and Environmental Sustainability and Environmental Health and Safety Guidelines (IFC, 2012a and 2012b), the Equator Principles III (Equator Principles, 2013) and the Voluntary Principles on Security and Human Rights (UN, 2000). Chapter 3, Legal, Policy and Administrative Framework elaborates on additional topic-specific IFC management guidelines that also informed the WGJV policies and standards.

The WGJV have identified and engaged with local communities and other stakeholders in a transparent manner, as understanding of the Project has evolved. This engagement will continue throughout the Project life and is underpinned by the WGJV Stakeholder Engagement and Management Plan. On a day-to-day basis, engagement with local communities is overseen, coordinated and carried out by the WGJV Community Affairs and Lands team. Chapter 5, Stakeholder Engagement presents an overview of Project engagement to date. Through its social management and national content plans, the WGJV will seek to reduce potential adverse impacts on these communities and to deliver real benefits to local communities based on a range of key initiatives.

The development of the Project to its maximum extent is a further objective of the WGJV Participants; however, the extent to which this will be realised cannot be determined with

¹ For further information on Mineral Resources and Ore Reserves, refer to Harmony Gold Mining Company Limited and Newcrest Mining Limited websites.

certainty due to unpredictable influencing factors including commodity prices, exchange rates and further exploration results.

2.3. Consistency with the State of PNG Development Policy and Strategies

The Project is consistent with the State of PNG's national goals identified in the Constitution of the Independent State of PNG (the Constitution) (State of PNG, 1975). The State of PNG's national and regional development strategy cascades from the Constitution via the National Strategic Plan 2010-2050 (NSPT, 2009), the PNG Development Strategic Plan 2010-2030 (DNPM, 2010) and the National Strategy for Responsible Sustainable Development (DNPM, 2015). The consistency of the Project with the State of PNG's development strategy is discussed further in the subsections below.

2.3.1. Constitutional Goals

The Constitution identifies five national goals, which are:

1. Integral human development
2. Equality and participation
3. National sovereignty and self-reliance
4. Natural resources and environment
5. Papua New Guinean ways

Of particular relevance are the following four national goals:

Integral human development

The integral human development goal focuses on providing all citizens with the opportunity to achieve their potential. This includes quality education, improved health services and developing business skills.

If developed, Project activities will generate increased tax and royalty funds which may be allocated by the State of PNG to improve the quality of local, provincial and national service delivery.

Equality and participation

The equality and participation goal focuses on the equal opportunity that citizens should have in benefiting from the nation's development. The Project, if developed, would provide PNG citizens and companies with the opportunity for employment or provision of business services. This national goal also focuses on the development and improvement of infrastructure in rural areas, which is relevant to the Mine Area.

The Project, if developed, will lead to the construction of new, and the improvement of the quality of existing, infrastructure in the vicinity of the Mine Area.

National sovereignty and self-reliance

The national sovereignty and self-reliance goal focuses on PNG's national sovereignty, economic and political success, and reducing reliance on aid. The Project, if developed, will contribute to this goal by increasing national revenue and Gross Domestic Product (GDP), which could lead to an improvement in the financial independence of the country.

Natural resources and environment

The natural resources and environment goal focuses on the sustainable management of natural resources for the benefit of both present and future generations.

Designing and operating the Project in a manner that minimises potential impacts to the environment, while simultaneously providing capacity-building opportunities for citizens of PNG, has the potential to provide beneficial impacts that exist beyond the life of the Project.

2.3.2. PNG Vision 2050

The National Strategic Plan 2010-2050, known as PNG Vision 2050, was introduced in late 2009 and embraces the five national goals that are enshrined in the PNG Constitution. The plan seeks to address PNG's social and economic indicators through strategies that focus on seven 'pillars':

1. Human capital development, gender, youth and people empowerment
2. Wealth creation, natural resources and growth nodes
3. Institutional development and service delivery
4. Security and international relations
5. Environmental sustainability and climate change
6. Spiritual, cultural and community development
7. Strategic planning, integration and control

The Project, if developed, will provide employment, training and business development opportunities to local people, as well as create a platform for strategic community partnerships that contribute to human capital development, wealth creation, community development and institutional development.

Ongoing liaison with Mumeng Local Level Government (LLG), Wampar LLG, Lae Urban LLG, Ahi Rural LLG, Morobe Provincial Government, Morobe Provincial Administration and the State of PNG will provide further scope to contribute to these pillars.

2.3.3. Papua New Guinea Development Strategic Plan

The PNG Development Strategic Plan seeks to translate the focus areas of PNG Vision 2050 into economic and public policy by creating clear objectives, quantitative targets and baseline indicators. The PNG Development Strategic Plan sets out the 20-year strategies and targets to achieve PNG Vision 2050, and provides interpretation of the directives and goals of the Constitution (DNPM, 2010).

Of particular relevance to the Project is that the PNG Development Strategic Plan acknowledges that the minerals sector has historically been the primary source of PNG's exports and this will continue to be a significant source of government revenue in the future. The PNG Development Strategic Plan goal for the minerals sector is to *'Double mineral exports, while minimising the adverse impact on the environment'*. The Project, if developed, will assist in achieving this and related goals by:

- Maximising the benefit from the development of the Wafi-Golpu resource while managing the potential environmental impacts associated with ore extraction and processing. This will be achieved via implementation of the proposed management measures described in this EIS.
- Providing employment and wealth creation opportunities for the communities living in proximity to the Project through local content policies, strategies and plans.

2.3.4. National Strategy for Responsible Sustainable Development

The National Strategy for Responsible Sustainable Development seeks to strengthen PNG's progress towards sustainable clean energy sources and investment in a 'green' economy. A green economy strives for improved human well-being and social equity, while

significantly reducing environmental risks and ecological scarcities (UNEP, 2011). The strategy notes that growth in income and employment in a green economy is driven by public and private investments that reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem services (DNPM, 2015). Proposed management measures described in the EIS impact assessment chapters (Chapters 14 to 20) and the integrated management system chapter (Chapter 23) will aim to avoid or reduce the loss of biodiversity and subsistence resources used by communities.

Further detail is also provided in the management plans attached to this EIS, including:

- Conceptual Closure and Rehabilitation Plan (Attachment 2)
- Environmental Management Plan (Attachment 3)
- Social Management Plan (Attachment 4)
- Cultural Heritage Management Plan (Attachment 5)

2.4. Benefits of the Project

If constructed, the Project will be one of the largest mining projects in PNG and has the potential to generate significant long-term economic benefits at the local, regional and national level.

The WGJV estimates the initial capital expenditure² to build the Project to commercial production will be United States Dollars (USD) 2.8 billion (B) with a Life of Mine capital expenditure of approximately USD 5.4 billion.

The Project will directly benefit the PNG economy in a number of ways. These include:

- Direct financial benefits including:
 - Taxes paid to the State of PNG by the WGJV Participants.
 - Royalties paid to the State of PNG and allocated to Morobe Province (as agreed between the State of PNG and Morobe Province stakeholders).
 - Any special support grants allocated by the State of PNG to Morobe Province as budget support for infrastructure development.
- Procurement of equipment and materials from within Morobe Province and elsewhere in PNG, where practicable. This will be supported by WGJV's National Content Plan, which aims to support, as far as practicable, the establishment of local businesses that are sustainable in the longer term.
- Employment and training to maximise the proportion of PNG workers over time, with strategies to realise this objective set out in the WGJV's National Content Plan. Due to the geographic spread of the proposed Project infrastructure, separate construction workforces will be required for the Mine Area, Infrastructure Corridor, Port Facilities Area and Outfall Area. The construction workforce across these areas is estimated at 2,500 full time equivalent workers. Once operational and at full production, the Project is expected to employ approximately 850 people. From commencement of production from Block Cave (BC) 44, the workforce will transition over time to a largely PNG workforce as the required skills and competencies are developed to safely and efficiently perform the work.
- Wages paid to employees of WGJV and contractors.

² The WGJV Participants' share of capital expenditure relating to the Project is currently expected to be funded from their free cashflow and/or corporate bank facilities.

- Contributions to national mineral export revenue, total export revenue and GDP.
- Strategic community-level investments by the WGJV in services, infrastructure, local business and livelihood development.

If the Project does not proceed, Project-derived benefits (including those socioeconomic benefits listed above) will not occur. Equally, the potential adverse impacts of the Project discussed in the subsequent chapters of this EIS will also not occur.

The extent to which Project benefits are considered to outweigh the potential adverse impacts of the Project, and the assessment of the sufficiency of the proposed management measures described in the impact assessment chapters of this EIS, will vary with the individual values and priorities of each stakeholder.

General support among Mine Area landowners for the development of 'a project', conveyed through the ongoing engagement activities by the WGJV and described in Chapter 5, Stakeholder Engagement remains firm. In March 2018, the WGJV conducted a series of information sessions across the Project Area (commonly referred to in PNG as a 'roadshow'). Roadshow sessions were attended by WGJV staff, EIS specialists and PNG government representatives. The latest Project design, current Project schedule, approvals process and the consultation program were presented. Attendees were given opportunities to ask questions and make comments. Questions and comments sought to understand the Project description, Project benefits, DSTP impacts and socioeconomic impacts.

The WGJV recognises that timely, transparent engagement and WGJV responsiveness to issues raised by stakeholders will be critical to maintaining and enhancing ongoing stakeholder support.

2.5. References

JORC. 2012. Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves. Prepared by the Joint Ore Reserve Reporting Committee.

ICMM, 2015. Sustainable development framework. International Council on Mining and metals. A WWW publication accessed at <http://www.icmm.com/en-gb/about-us/member-commitments/icmm-10-principles> on 28 June 2017.

IFC. 2012a. Performance standards on social and environmental sustainability. January. International Finance Corporation. Washington, D.C.

IFC. 2012b. International Finance Corporation's guidance notes: performance standards on social and environmental sustainability. Guidance note 1. Social and environmental assessment and management systems. January. Report prepared by International Finance Corporation, Washington, D.C.

DNPM. 2010. Papua New Guinea Development Strategic Plan 2010-2030. Prepared by the Department of National Planning and Monitoring.

DNPM. 2015. National Strategy for Responsible Sustainable Development for PNG – A Paradigm Shift: Addendum to the Development Strategic Plan 2010 – 2013, Waigani: Department of National Planning and Monitoring.

Equator Principles. 2013. *The Equator Principles. A financial industry benchmark for determining, assessing and managing social and environmental risk in project financing*: www.equator-principles.com.

NSPT. 2009. Papua New Guinea Vision 2050. Report prepared by the National Strategic Plan Taskforce for the Independent State of Papua New Guinea. Accessed from http://www.treasury.gov.pg/html/publications/files/pub_files/2011/2011.png.vision.2050.pdf

State of PNG. 1975. Constitution of the Independent State of Papua New Guinea. Port Moresby, Papua New Guinea. Accessed from http://www.wipo.int/wipolex/en/text.jsp?file_id=199188#LinkTarget_1777

UN. 2000. Voluntary principles on security and human rights. A statement by the governments of the United States of America and the United Kingdom. United Nations Global Compact. New York, USA.

UNEP. 2011. Towards a Green Economy: Pathways to Sustainable Development and Poverty Eradication - A Synthesis for Policy Makers. Prepared by United Nations Environment Programme. Accessed at www.unep.org/greeneconomy

WGJV. 2018. Feasibility Study Update. Wafi-Golpu Joint Venture.