



KIRKLAND LAKE GOLD

# SUSTAINABILITY

**Global Sustainability  
Report 2021**







# Table of Contents

4	About Kirkland Lake Gold	<b>47 Environment</b>
5	About this Report	48 Energy and Climate Change
8	Our 2020 Performance	52 Water Management
10	Approach to Sustainability	58 Tailings and Waste Management
13	You Told Us	62 Environmental Compliance
14	Materiality	64 Reclamation and Closure
<b>16</b>	<b>Governance</b>	70 Biodiversity
17	Corporate Governance	73 Air Quality and Noise
21	Governance of Sustainability and Climate-Related Risks	<b>75 Sustainability Ledger</b>
23	Human Rights	
<b>25</b>	<b>Social</b>	
26	COVID-19 Pandemic Response	
30	Health and Safety	
33	Our People	
38	Community and Indigenous Relations	

**GOING FOR GOLD IN EVERYTHING WE DO**

# About Kirkland Lake Gold

Kirkland Lake Gold Ltd. (KL Gold) is a growing gold producer operating in Canada and Australia. We produced 1,369,652 ounces in 2020 and target guidance for 2021 of 1.3 to 1.4 million ounces. The year 2020 was one of exceptional growth with the acquisition of Detour Lake Gold Corporation. Our production profile is now anchored by three cornerstone operations, including the Macassa Mine and Detour Lake Mine, both located in Northern Ontario, Canada, and the Fosterville Mine located in the State of Victoria, Australia.

KL Gold’s solid base of quality assets is complemented by district scale exploration potential, supported by a strong financial position with extensive management expertise. For further information on KL Gold and to receive news releases by email, visit the website at [kl.gold](http://kl.gold).

## Canada



### Detour Lake Mine

**Location:** Ontario  
**Mining method:** Open Pit  
**Ownership:** 100% KL Gold  
**Production:** 517\* kozs in 2020

### Macassa Mine

**Location:** Ontario  
**Mining method:** Underground  
**Ownership:** 100% KL Gold  
**Production:** 183 kozs in 2020

## Australia



### Fosterville Mine

**Location:** Victoria  
**Mining method:** Underground  
**Ownership:** 100% KL Gold  
**Production:** 640 kozs in 2020

\*Detour Lake Mine production from date of acquisition on January 31, 2020 to December 31, 2020





## About this Report

This 2021 Sustainability Report provides a comprehensive overview of KL Gold's health, safety, environment, governance and social performance, including data for the year ending December 31, 2020.

For this report, KL Gold has introduced a modified structure compared with prior years, aligning our discussion with the key material topics that drive environment, social and governance (ESG) related issues across KL Gold.

### Scope

In January 2020, KL Gold completed the acquisition of Detour Gold. The Detour Lake Mine has been incorporated into our reporting. The scope of this report therefore covers our three mining operations: Macassa Mine in Ontario (Canada), the Detour Lake Mine in Ontario (Canada) and the Fosterville Mine in Victoria (Australia). Exploration, reclamation

and development properties were generally excluded; however, we do report on select initiatives undertaken.

Unless otherwise stated, all dollar (\$) amounts in this report are expressed in United States dollars, consistent with KL Gold's financial reporting.

Reporting limitations and exceptions are noted with the data where possible. Please refer to [kl.gold](https://kl.gold) for guidance on financial and forward-looking information.

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KL Gold has started integrating reporting performance against the following external frameworks. We are also pleased to share we have received external assurance on our first year of implementing the WGC RGMPs (see "[Approach to Sustainability](#)").





## Message from the President and CEO



KL Gold is thrilled to announce a planned investment of \$375 million over the next five years (\$75M per year) to establish and fund centres for technology and innovation near our operations in both Canada and Australia.

These centres will focus on three key areas:

- 1 Reducing our carbon footprint to reach net-zero by 2050, or sooner.
- 2 Building smart mines through innovation, automation and digitization
- 3 Supporting the communities where we work in the areas of:
  - Health and well-being including seniors care, mental health, addiction
  - Youth training and skills development

**The year 2020 was one we will always remember. Faced with the challenges of a global pandemic, we took decisive action. At Kirkland Lake Gold, nothing is more important than the health and safety of our people, the well-being of our communities and the responsible operation of our business.**

Our response to COVID-19 included introducing extensive measures at all sites so people could continue to work safely; partnering with local businesses in new ways, creating opportunities to help keep them operating; and providing support to our communities at unprecedented levels. As part of this support, we pledged \$20 million to help fund local community and health organizations, with a focus on homelessness, mental health, addiction, seniors care, youth training and skills development.

Clearly, our people rose to the challenge, turning in our finest year ever, including our best safety performance and environment stewardship, record production, earnings and free cash flow. We returned \$848 million to shareholders through dividends and share buy-backs, continued to invest significant capital in exploration and growth projects aimed at promoting the long-term sustainability of our business and completed a major acquisition, adding Detour Lake Mine in January.

Very importantly, we continued to make contributions to our communities in 2020, including \$905 million in spending in Ontario and Victoria (representing 76% of total expenditures), and \$306 million in wages, most of which remained within the communities where we operate.

We also launched a new initiative aimed at establishing centres for technology and innovation near our operations in both Canada and Australia. We plan an investment of \$75 million per year for five years to establish and fund these centres, which will focus on three key areas;

- reducing our carbon footprint to reach net-zero by 2050, or sooner
- building smart mines through innovation, automation and digitization, and
- supporting the communities where we work in the areas of health and well-being, including senior citizen care, mental health, addiction, youth training and skills development.



As we embrace our mantra, “Going for Gold in Everything We Do,” we have taken significant steps to increase our disclosure on Environment, Social and Governance (ESG) topics. We have advanced our sustainability reporting for further inclusion of Sustainable Accounting Standards Board (SASB) disclosures and metrics for Metals and Mining and have embraced the World Gold Council’s Responsible Gold Mining Principles, including completing our Year 1 External Assurance. We have also made progress against the United Nations Sustainable Development Goals, with examples of initiatives taken highlighted throughout this report. In addition, we formalized our Human Rights Policy to act in accordance with the International Bill of Human Rights; established an Executive Leadership team to promote diversity, equality and inclusion; developed a Supplier Code of Conduct; and instituted a global standard across our grievance mechanisms. In January 2021, we also became a member of the Mining Association of Canada and adopted the Towards Sustainable Mining standard.

Looking at the environment, there are many areas where Kirkland Lake Gold ranks favourably. All of our mines have Greenhouse Gas (GHG) emission levels well below industry averages as set out by the World Gold Council, with Macassa having among

the lowest GHG emissions worldwide. We effectively manage water, with Fosterville and Detour Lake Mine being zero process water discharge sites, and Macassa recycling over 96% of process water. Also, we make significant investments in tailings management, with our active tailings facilities meeting or exceeding all MAC/CDA and ANCOLD guidelines. In terms of recognition, our Detour Lake Mine was recently awarded the prominent 2020 Tom Peters Memorial Mine Reclamation Award for its Progressive Reclamation Program aimed at reclaiming 10 hectares of land per year commencing in 2019.

We encourage you to read our 2021 Sustainability Report to learn more about our efforts to advance responsible mining at Kirkland Lake Gold. We are proud of our people and their efforts to promote sustainability in 2020, and are excited about the prospects for additional progress in 2021. On behalf of our entire team, we thank you for your interest in Kirkland Lake Gold and we welcome your feedback.



**Tony Makuch**





# Our 2020 Performance

## Environment



GHG Intensity Basis



**0.316**

t CO<sub>2</sub>e/oz of gold

**Target:** net-zero by 2050, or sooner

Energy Intensity

**0.16**

GJ/t ore processed



Water Intensity

**0.38**

m<sup>3</sup> consumed/t processed



Water Efficiency

(Total Water Used that is Recycled)



**70%**



Tailing Facilities Incidents



Sites covered under biodiversity plan

**100%**

Land Reclamation

2020 Recipient of Tom Peters Memorial Mine Reclamation Industry Award



Total Global Reportable Incidents  
(Total Reportable Incident Frequency Rate)

**22**



(0.586 TRIFR)

incidents/200,000 hrs

## Our people



% of workforce who are local



(does not include rotational personnel)

Gender Diversity  
(% women at all levels)

**10%**

Board Diversity

**25%**

of Board Members are Women

Employee Training Hours in 2020

**80,000+**

Total Workforce (by headcount)

Global:

**4,290**

Canada:

**3,390**

Australia:

**900**







## Communities



Community Donations

**\$3,500,000**

Site covered Grievance Mechanisms

**100%**

Percent of spend on Ontario and Victoria Supply Chain

**76%**

\$905M



Goods and Services from Companies with Indigenous Ownership 2020 Spend

**\$263.4M**

Number of Supply Chain Human Rights Grievances

**0**

## Health & Safety



Lost Time Injury Frequency Rate (LTIFR)



**0.3**

incidents/200,000 hrs

Fatalities

**0**

Total Hours of Emergency Response Training



**3,000+**

New Company Record for Loss Time Incident Free period (Detour Lake Mine)



**over 365 days**

## Finance



Tax and royalty payments

**\$364M**

Salaries and Wages

**\$306M**

Money allocated to support community COVID-19 response in 2020

**\$20M**



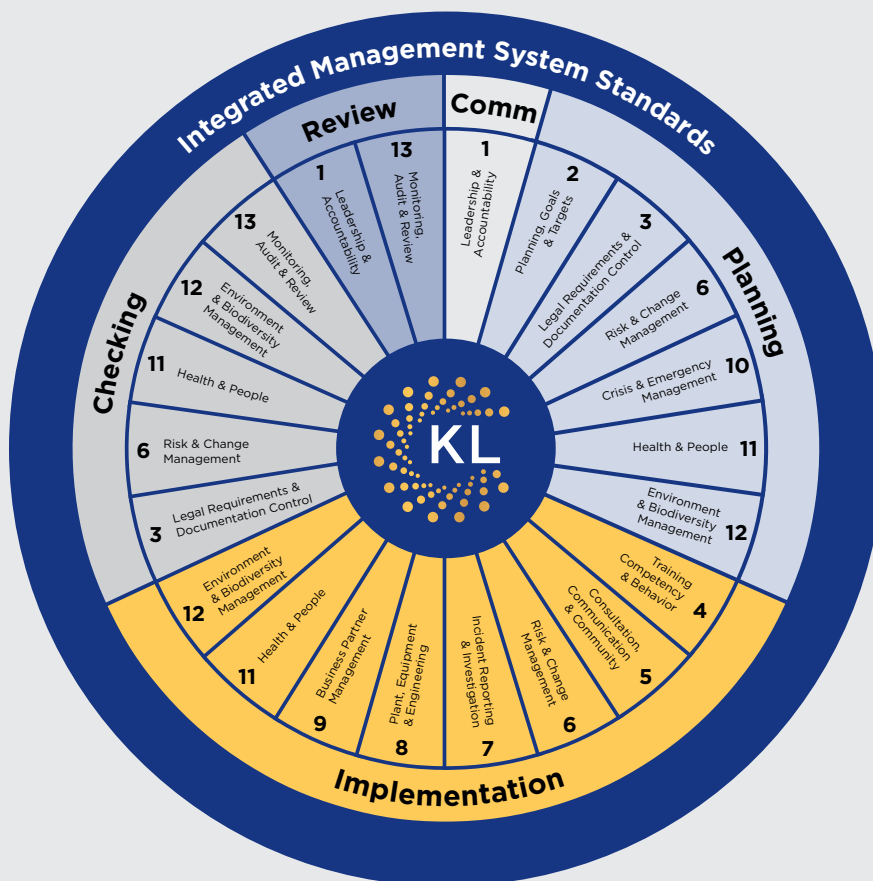
## Approach to Sustainability

**KL Gold understands that mining in an environmentally and socially responsible way is essential to our operating and financial success. We are committed to integrating and promoting sustainability into all facets of our business.**

For us, that means:

- ensuring we provide a safe working environment;
- implementing responsible environmental practices and effective environmental management systems throughout our organization;
- creating meaningful opportunities for local employment and training;
- developing community relationships based on open and honest communication; and
- ensuring that the communities in which we operate benefit from our presence.

provides a framework for driving commitment across the business to manage risks. The Management Standards are aligned with the requirements of KL Gold's policies and recognized international and national standards, including ISO 14001, ISO 31000 and ISO 45001.



Our [Environmental Policy](#) and [Social Responsibility Policy](#) highlight these commitments and are reviewed regularly. To implement our commitments in our operations, KL Gold uses the Integrated Management System (IMS), which covers the health and safety, environment and human resource management requirements as applicable into our operations and services. The intent of the IMS is to combine all related management processes into one system and

## Guiding Frameworks

Underlying our commitment to sustainability is our support of internationally recognized best practices and frameworks. These not only demonstrate KL Gold's commitment to high standards of ESG performance, but also to allow external stakeholders to hold us accountable.

### Responsible Gold Mining Principles

The World Gold Council (WGC) has set out the Responsible Gold Mining Principles (RGMPs) as a framework for clear expectations for consumers, investors and the downstream gold supply chain as to what constitutes responsible gold mining.

In 2020, KL Gold was pleased to have received external assurance on our first year of implementing the RGMPs as discussed in our Year 1 Implementation Report available on our website [here](#). We currently expect by 2022, KL Gold's performance should align with the RGMPs and you will find examples describing how our activities endeavour to do so in this report, marked with the following goal icons.



### Towards Sustainable Mining

The Mining Association of Canada's (MAC) Towards Sustainable Mining (TSM) initiative promotes best practices in environmental protection, energy efficiency, community engagement, safety and transparency. In 2021, KL Gold became a MAC member and began participating in the TSM program. As part of this commitment, we are working to have all systems/processes developed and implemented required by TSM by 2023.

## United Nations Sustainable Development Goals

The United Nations Sustainable Development Goals (SDGs) are a universal set of 17 goals and 169 targets aimed at eliminating poverty, protecting the environment and providing a shared blueprint for peace and prosperity for people and the planet, now and into the future. KL Gold supports the SDGs and looks for meaningful ways to contribute to their achievement. We recognize that the mining industry has an opportunity to positively contribute to all 17 of the SDGs. Throughout this report, you will find examples describing how our activities endeavour to do so, marked with the following goal icons.

### THE GLOBAL GOALS

For Sustainable Development



## International Council on Mining and Metals (ICMM)

ICMM's Mining Principles and ICMM Performance Expectations (PEs) define best practice in environmental, social and governance requirements for the industry. ICMM's Mining Principles are aligned to other responsible mining initiatives through a shared objective of improving environmental, social and governance practices at the operational level. KL Gold uses the PEs as guidance to improve our performance.



### **Cyanide Code**

The International Cyanide Management Code is a voluntary industry program that focuses exclusively on the safe management of cyanide and cyanidation mill tailings and leach solutions. Detour Lake Mine is certified under the ICMC, whereas KL Gold's other mines are compliant with ICMC standards of practice for cyanide transport, storage, use, and disposal.

### **Sustainability Accounting Standards Board (SASB)**

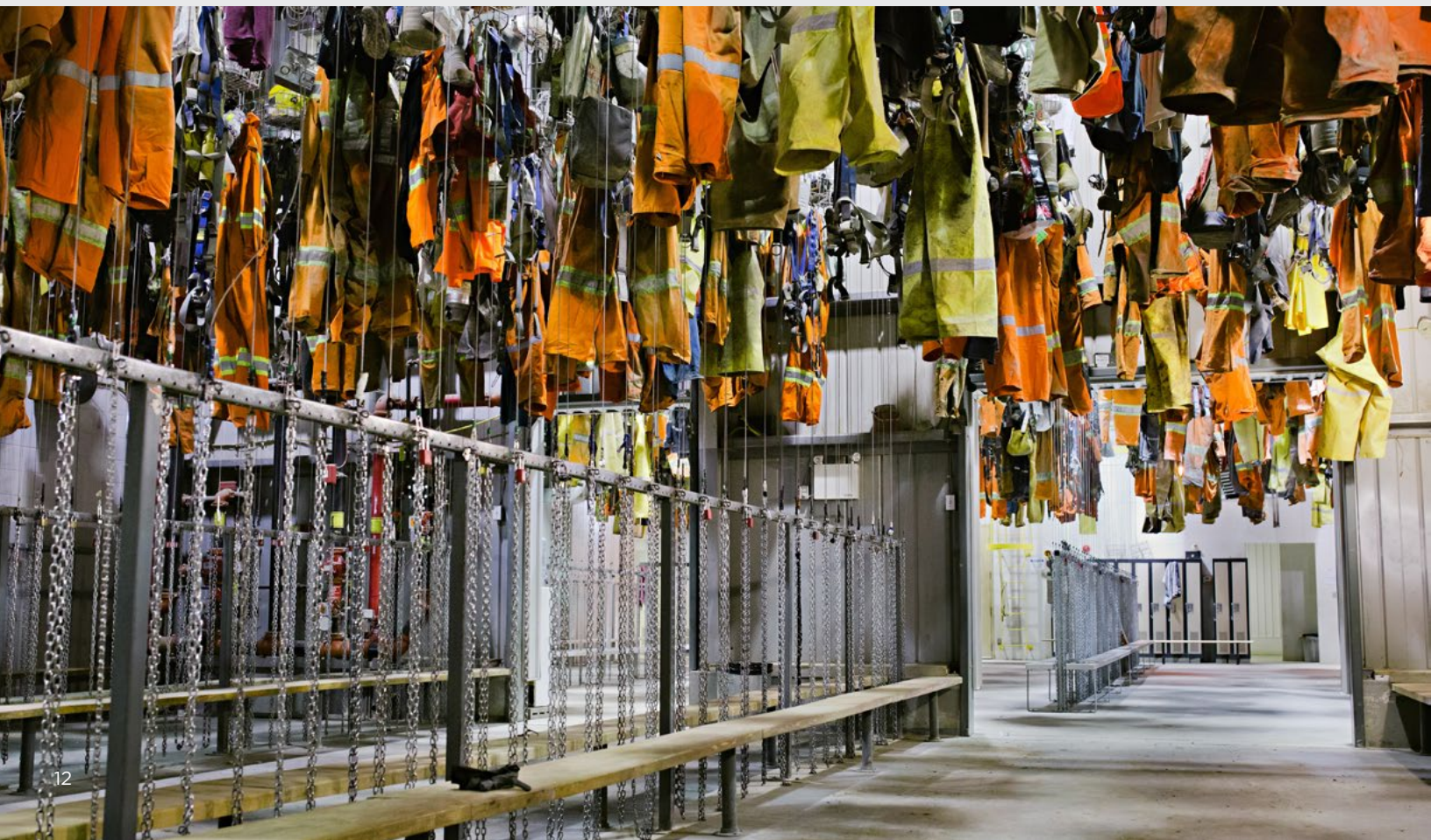
SASB developed a set of 77 industry standards, including for the Metals and Mining sector, to provide a complete set of globally applicable industry-specific standards. These identify the minimum set of financially material sustainability topics and their associated metrics for the typical company in an industry. We include alignment against the key metrics in the SASB Metals and Mining Standard (version 2018-10) in this report as indicated in each section and SASB Index on page 80.

### **Task Force on Climate Related Financial Disclosures (TCFD)**

The Financial Stability Board established the TCFD to develop recommendations for more effective climate-related disclosures that could promote more informed investment, credit, and insurance underwriting decisions. At KL Gold, we support the TCFD objectives and have begun the process of aligning our climate strategy and related disclosures with the recommendations of the TCFD. See the TCFD Index on page 81 for indicated disclosures.

### **Carbon Disclosure Project (CDP)**

The CDP is a not-for-profit charity that runs the global disclosure system for companies and investors to manage their environmental impacts. We are committed to transparent disclosure of our impacts, and as part of this, we plan to respond to the CDP carbon questionnaire in 2021.



# You Told Us

As we continue to grow, our stakeholder base has grown and so have our conversations. Through formal and informal engagement, we have heard the most on the following key ESG focus areas:



## COVID-19 AND THE IMPORTANCE OF HEALTH

The mining industry has always put health and safety as a priority and this year tested the resilience of our approach.

By far our most important achievement was our extensive response to [COVID-19](#), which clearly demonstrated that nothing is more important than the health and safety of our people and the responsible operation of our business. In responding to COVID-19, we reduced or suspended operations where necessary, introduced extensive health and safety protocols across the company, and added new important measures, such as rapid COVID-19 testing for those travelling to Detour Lake Mine. It is imperative that we all continue to work diligently to protect our people and communities.



## CLIMATE CHANGE IS IMPORTANT

Climate Change is becoming increasingly important to stakeholders. Stakeholders want to know what we are doing about it and what role we play in reducing our impacts.

We have been [leading the industry](#) in greenhouse gas reduction since 2012. We were the first to introduce battery electric vehicles in our operations and in 2020, commissioned the world's first 50-tonne battery electric truck for use underground. Being a leader in such innovation came with challenges that we are still investing in to pave the way to making the technology commercially viable for our peers. We are below industry benchmarks on emission intensity on greenhouse gases and look to reach net zero by 2050 at the latest by investing towards greenhouse gas reduction and innovation.



## INCREASING DISCLOSURE IS WELCOMED

KL Gold is proud of our ESG efforts and stakeholders want to learn more about them.

One area you have asked us to improve is our ESG disclosure. We have always taken pride in doing the right things and have had a grassroots approach to sustainability. Doing the right thing makes business sense and we have a responsibility to our communities and shareholders. In response to growing requests to increase disclosure, we have adopted the World Gold Council's Responsible Mining Principles and the Mining Association of Canada's Towards Sustainable Mining. We also present our sustainability reports in accordance with the Sustainability Accounting Standards Board standards to give our stakeholders the data they need to [measure our performance](#).



# Materiality

KL Gold regularly engages with shareholders, employees, business partners, government bodies and people in the communities in which we operate to identify issues most important to them. The intention of this report is to describe our management approach and performance concerning material ESG topics that drive sustainability across KL Gold and stakeholder interest.

We recognize these issues may change over time, reflecting changes in our business and external operating environment and the expectations of our stakeholders. We use the results of the materiality assessment to inform our business strategy and our sustainability approach and disclosures.

KL Gold’s materiality process consisted of the following steps:

**Cultivate Sources**

Stakeholder engagement; external research; international frameworks; sustainability assessments and rankings; megatrend analysis

**Identify the Universe of Material Topics**

50 ESG topics relevant to KL Gold were identified

**Conduct Materiality Survey**

A sample of relevant company representatives were systematically surveyed

**Validate Results**

The results were presented to KL Gold senior executives and President & CEO

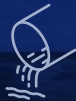
**Report and Discuss**

Results of process disclosed publicly and trends analyzed for performance improvement

## Most Important Topics



Environmental Compliance



Tailings Management



Health and Safety Management Systems



Indigenous Rights, Consultation and Involvement Programs



GHG Emissions and Reductions



Effluent (Discharge) Management



Cyanide Management



Environmental Policy

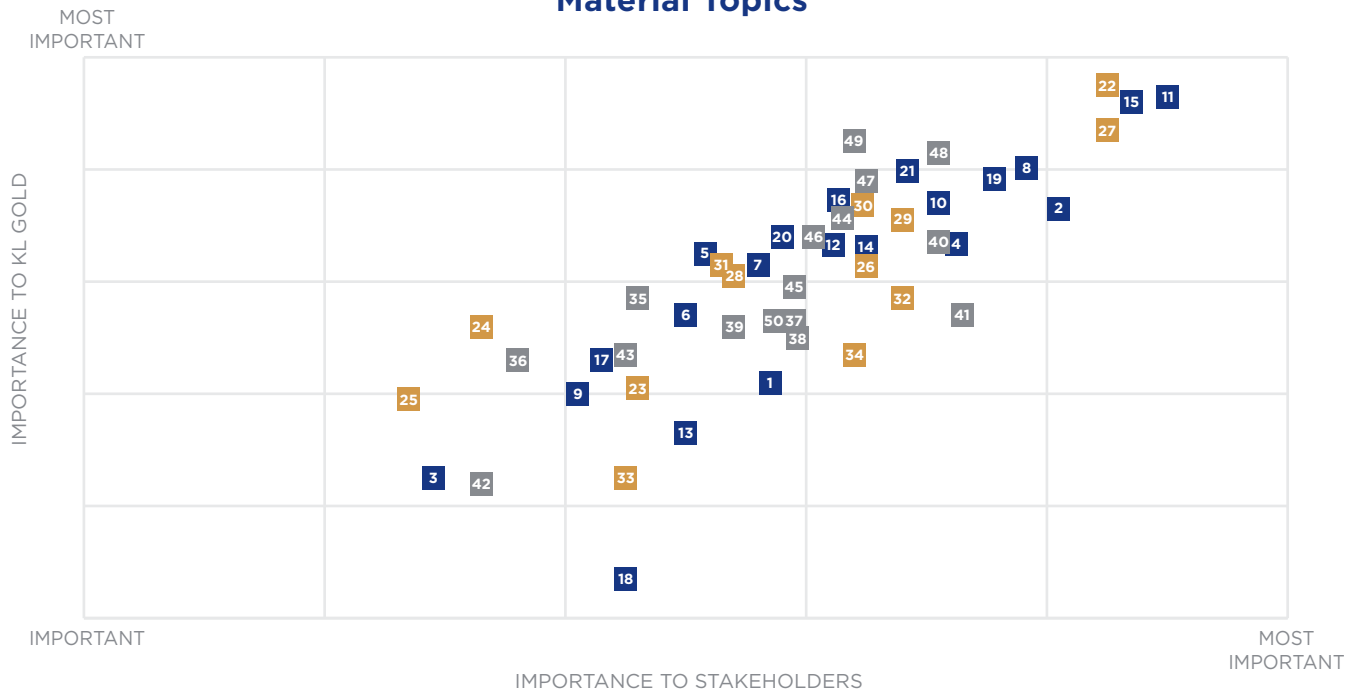


Business Ethics and Anti-Corruption Policy



Air Quality

## Material Topics



### ENVIRONMENT

- 1 Physical Climate Risk
- 2 GHG Emissions and Reductions
- 3 Scope of GHG Reporting
- 4 Air Quality
- 5 Energy Management
- 6 Renewable Energy Programs
- 7 Fresh Water Management
- 8 Effluent (Discharge) Management
- 9 Water Scarcity Risk Management
- 10 Environmental Policy
- 11 Environmental Compliance
- 12 Environmental Management System (EMS)
- 13 EMS Certification
- 14 Biodiversity Programs
- 15 Tailings Management
- 16 Waste Rock Management
- 17 Hazardous Materials Management (not mercury or cyanide)
- 18 Mercury Use
- 19 Cyanide Management
- 20 Progressive Rehabilitation
- 21 Closure and Reclamation

### SOCIAL

- 22 Health and Safety Management Systems
- 23 Health and Safety Certification
- 24 Staff Training and Development
- 25 Road Safety
- 26 Indigenous Development Programs
- 27 Indigenous Rights, Consultation and Involvement Programs
- 28 Community Development Programs
- 29 Community Consultation and Involvement Programs
- 30 Local Benefits
- 31 Nuisance (noise, dust, odours, vibration)
- 32 Cultural Heritage
- 33 World Heritage Sites
- 34 Human Rights

### GOVERNANCE

- 35 Cybersecurity and Privacy
- 36 Attraction and Retention
- 37 Diversity and Inclusion Policy
- 38 Governance of Sustainability
- 39 Labour Practices and Policies
- 40 Business Ethics and Anti-Corruption Policy
- 41 Transparency
- 42 Lobbying and Political Involvement
- 43 Government Payments
- 44 Management of the Legal and Regulatory Environment
- 45 Systemic Risk Management
- 46 Emergency Preparedness and Business Continuity
- 47 Critical Incident Risk Management
- 48 Business Sustainability
- 49 Operational Efficiency
- 50 Responsible Procurement and Supply Chain Management





Governance

# Corporate Governance

KL Gold's governance practices guide our behaviour and help ensure we act in an ethically responsible manner and uphold our commitment to responsible mining. Our corporate governance framework is underscored by policies, standards and processes that are governed by the Board of Directors, and implemented by our Executive Leadership and management.

## Governance Practices and Policies

KL Gold and the Board recognize good governance plays a critical role in our effective performance, maximizing our value and protecting stakeholders' interests. The Board oversees the direction and strategy of KL Gold in light of opportunities or risks that the company faces.

The list of policies and standards that make up the governance framework are available on KL Gold's [website](#). All our employees are required to reaffirm their commitment to the policies through a formal review and signature annually.



We continually review and improve our practices to achieve higher standards of corporate governance. The Board holds ultimate responsibility and accountability for the overall corporate governance of KL Gold and is actively involved in the oversight of every aspect of our business, including ESG issues.

KL Gold has consistently been a top performer in Corporate Governance due to a comprehensive and progressive approach.



### Governance Policies

- Anti-Bribery and Anti-Corruption Policy
- Anti-Hedging Policy for Directors and Executive Officers
- Articles and By-Laws
- Code of Conduct and Ethics
- Disclosure and Confidentiality Policy
- Diversity, Equality and Inclusion Policy
- Environmental Policy
- Executive Compensation Clawback Policy
- Health and Safety Policy
- Human Rights Policy
- Insider Trading Policy
- Majority Voting Policy
- Position Descriptions
- Social Responsibility
- Supplier Code of Conduct
- Whistleblower Policy and Reporting
- Workplace Violence, Harassment and Discrimination Policy







## Leadership Diversity

To promote the inclusion of various ideas and perspectives that ensure we benefit from the best available talent, the Board has adopted a written Board Diversity Policy which seeks to increase diversity at the Board level, including gender diversity. It provides for an annual review of Board diversity as a whole, the level of representation of women on the Board, and any diversity initiatives established by the Board and progress in achieving them.

The company currently has eight directors, two of whom are women, representing 25% of the current Board members. In addition, currently 25% of the senior management team is composed of women.



### GECKO—Promoting Diversity and Inclusion for All

The GECKO (Gender Equity Consultation Kick Off) formed in late 2019 focuses on barriers to diversity and paves the way for women to join KL Gold's Fosterville Mine operation.

Like the safety committee, all areas of the mine are represented, with 12 female members developing and applying initiatives, including:

- Creating a multi-purpose quiet room which enables women to express breast milk while at work, and provides space for prayer or quiet reflection.
- Increasing the number of women's washrooms underground and in the maintenance workshop.
- Forming a partnership with AUSIMM and acquiring sponsorship to promote women in mining and International Women's Day.
- Networking with female peers and sourcing funds to develop and grow GECKO initiatives to benefit the KL Gold team.
- Making the mining industry more appealing to women where their skills and talents are needed.



In 2021, we are working to broaden our diversity which included the distribution of an Organizational Values and Employee Engagement Survey, which helps gather baseline information and feedback from the Board and all employees to better benchmark, track and report on our journey towards diversity, equality, and inclusion.



### **Diversity, Equality, and Inclusion at KL Gold**

At KL Gold, diversity is a strategic business priority that reinforces our belief that a high-quality workforce requires that equality and inclusion be core to our culture. To reflect this position, we implemented our “Diversity, Equality and Inclusion Policy” across our company in 2020. This Policy forms the basis of an action plan aimed at

building and maintaining the best possible workforce by supporting the recruitment, retention and advancement of a diverse workforce through four overarching goals: Workplace Diversity; Workplace Equality; Workplace Inclusion; and Sustainability & Accountability. KL Gold will meet these goals by building leadership and

accountability; ensuring applicable diversity initiatives are included in talent management and succession planning; fostering an inclusive workforce by communicating our key values; and through appropriate training and development to ultimately eliminate unconscious biases and prejudices which may exist.

### **Executive Compensation**

KL Gold compensates our directors and executives in a competitive and balanced way based on performance. As a reflection of our commitment to responsible mining and belief in its value, this includes KL Gold’s ESG performance.

### **Business Conduct and Ethics**

KL Gold is committed to doing business in an ethical manner, which is reflected in our Code of Conduct and Ethics for its directors, officers, employees, and business partners. The Code embodies the commitment to

conduct our business following all applicable laws, regulations and high ethical standards. Its purpose is to promote conduct that reflects honesty, integrity and impartiality beyond doubt, including the ethical handling of actual or apparent conflicts of interest. The Code restricts any corporate funds from being used in any direct political involvement, contribution, or lobbying. Those who violate the Code’s standards will be subject to disciplinary action, up to and including termination. KL Gold provides annual review and training on key components, revisions and obligations under the Code to its employees and certain third parties, which includes a mandatory individual sign-off.

### **Anti-Corruption**

KL Gold has a zero-tolerance approach to bribery and corruption. Our Anti-Bribery and Anti-Corruption Policy outlines requirements that must be fulfilled by all our directors, officers, and employees. These requirements include prohibitions against bribing government officials, making facilitation and improper payments. The policy also provides employees with clarity regarding giving gifts to government officials; making political or charitable contributions; books and records transparency; internal controls; and multiple reporting channels that are in place to encourage the reporting of violations, or suspected violations.





KL Gold's aggregate  
payments in 2020  
to government  
organizations were:

Taxes

**\$329 million**

Royalties

**\$31 million**

Fees

**\$4 million**

Our full ESTMA reports, including breakdown of payments and project, can be found on our [website](#). The 2020 report will be available in May 2021.

## Approach to Taxation

KL Gold generates direct economic value in the countries, regions, and communities where we operate through tax and royalty payments, and aligns transfer pricing outcomes with fair business practices and value creation. Although KL Gold is headquartered in Canada, which is not an implementing country of the Extractive Industries Transparency Initiative (EITI), we publicly disclose on an annual basis as per the Canadian Extractive Sector Transparency Measures Act (ESTMA), for both Canadian and Australian operations, which provides an equivalent level of reporting to the EITI Standard. Internal and external auditing is done to ensure alignment with internal and external statements.

We support the principles of the EITI and encourage governments to promote greater transparency around revenue flows, mining contracts and the beneficial ownership of license holders.

## Artisanal Mining

None of KL Gold's operations are impacted by artisanal or small-scale miners (ASM). In the event that any of our operations are impacted by ASM in the future, we will support access to legitimate markets for those ASMs who respect applicable legal and regulatory frameworks, who seek to address the environmental, health, human rights and safety challenges often associated with ASM activity, and who, in good faith, seek formalization. We will also consider supporting government initiatives to reduce and eliminate the use of mercury by ASMs.

# Governance of Sustainability and Climate-Related Risks

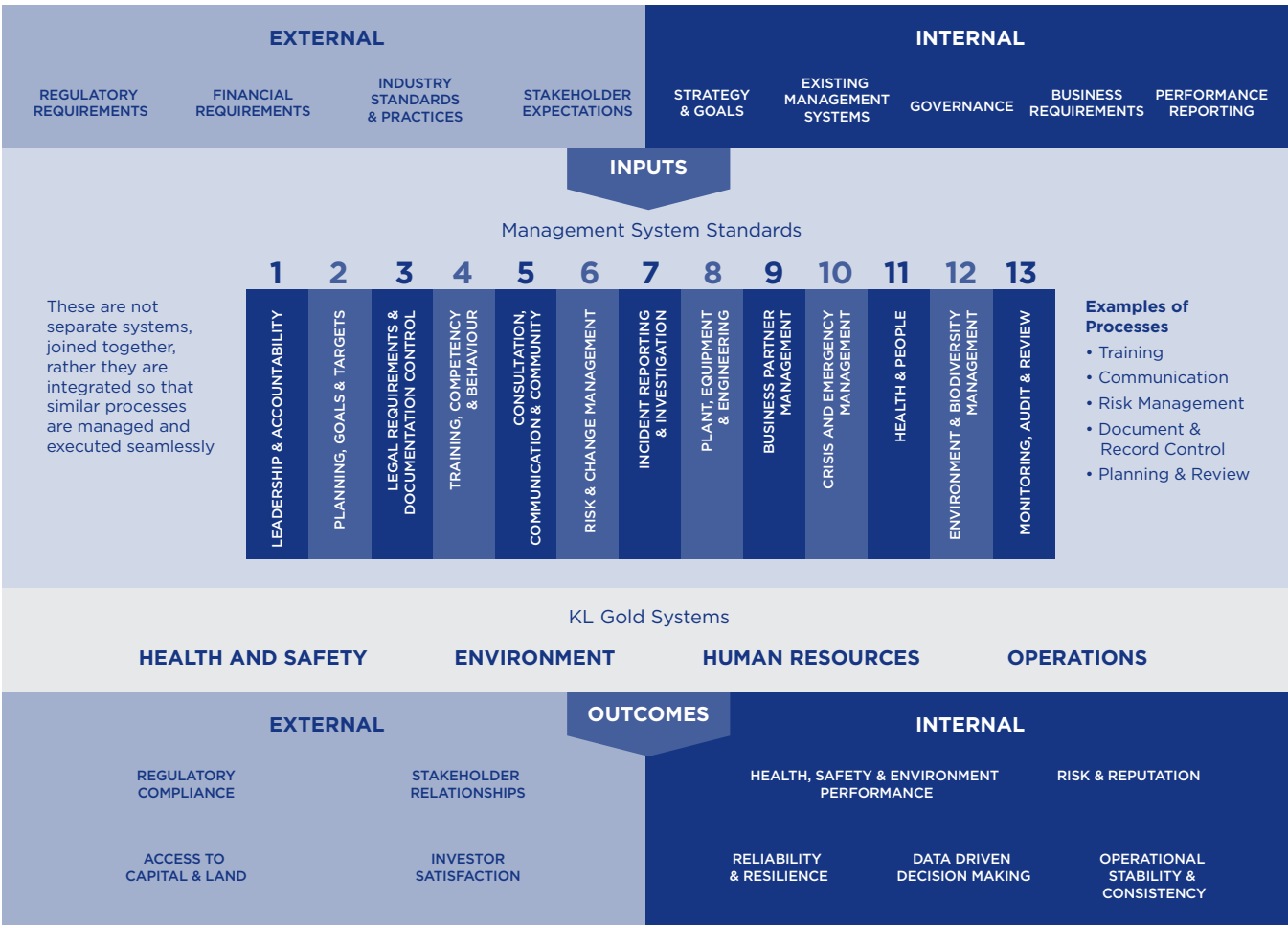
## Sustainability Governance Structure

The Health, Safety, Environment and Corporate Social Responsibility Committee (HSE and CSR) of the Board is responsible for supporting and reviewing the development of short- and long-term policies and standards for sustainability, environmental (including climate change), health and safety and corporate social responsibility.

The HSE and CSR Committee has access to all officers, employees and independent consultants necessary to perform its duties and responsibilities.

To implement our policies in our operations, KL Gold uses the Integrated Management System, which covers the health and safety,

environment and human resource management requirements as applicable in our operations. The diagram illustrates how the IMS is a set of interacting processes and inputs running through the Management Standards to produce the desired outputs.





## Understanding Our Risks

We maintain systems to identify and prevent or manage both the risks our operations face and those which our activities may pose to others. Our risk management framework includes both enterprise-level and site-level risk management programs, which include all identified ESG-related risks. Our enterprise risk register is reviewed every quarter by the Board, the Corporate Governance and Nominating Committee, and each of relevant subcommittees, as applicable, to ensure risks that had been addressed were appropriately reviewed and mitigated.

At the site level, each asset's risk management programs identify,

prevent, manage, and document site-specific ESG-related risks. Assessments are required to be prepared annually by relevant senior site staff and then reviewed and approved by senior management.

In 2021, we will work to further integrate ESG-related risks in site-based risk registers, such as those relating to human rights, ethical supply chain due diligence, stakeholder engagement, ongoing due diligence, audits and assurance.

### Climate Related Risks

KL Gold recognizes that climate change is both an international and local community concern with potential financial implications for

our company and stakeholders. We support the objectives of global climate accords and are committed to reaching net-zero greenhouse gas emissions by 2050, or sooner. We are actively working to enhance the ability of our operations to be resilient to the effects of climate change. We have initiated numerous programs to reduce our carbon emissions (see Energy and Climate Change on page 48), and are committed to aligning our climate strategy and related disclosures with the recommendations of the TCFD (see TCFD Index on page 81). We are committed to disclosing our findings and will make a full report available on our website once complete.



# Human Rights

KL Gold is committed to upholding and respecting the human rights of our employees, the communities in which we operate, those who may be impacted by our activities and those within our supply chains, which includes Indigenous rights, modern slavery, fair work, diversity and inclusion.

We conduct business in regions where human rights laws are respected and promoted. We are committed to upholding fundamental human rights as defined in the United Nations Universal Declaration of Human Rights and we report on overall implementation on these matters through the World Gold Council Conflict-Free Gold Assurance Report.

In response to an internal gap analysis review conducted in 2019, KL Gold adopted and implemented a [Human Rights Policy](#) declaring our commitment. Our Human Rights Policy and Code of Conduct and Ethics form the foundation for human rights protections across KL Gold. The policy includes specific commitments for ongoing due diligence to identify, prevent and mitigate any adverse impacts of our activities, and ensure continuous improvements to strengthen our actions.



## We ensure the protection of human rights by:

- Actively communicating our approach and expectations to all stakeholders, including suppliers
- Engaging with stakeholders to understand the impacts of our activities and working with them to optimize benefits and limit negative impacts
- Implementing an effective grievance mechanism
- Promoting our expectations of suppliers through the Supplier Code of Conduct
- Conducting Third-Party Risk and Compliance tracking of supplier performance







There were no “modern slavery” complaints during 2020 through either our site level complaints processes or Confidential Hotline.



### Modern Slavery Initiatives

In 2020, KL Gold released a company-wide commitment to end global exploitation of people by releasing our policy on modern slavery through our Supplier Code of Conduct and Human Rights Policy. Our approach outlines that KL Gold does not tolerate the use of child labour, prison labour, or any form of forced labour, slavery or servitude.

As this is a journey we cannot take alone, we also updated our business management process in 2020, to ensure that we are upfront with our expectation of suppliers and service providers to align with our values.

In 2021, we will publish a Modern Slavery Statement, the first required under Australia’s Modern Slavery Act 2018. The Statement will outline the actions KL Gold undertook in 2020 to mitigate modern slavery risks in its operations and supply chains.

### Our Supply Chain

We have a responsibility to understand and manage the risks present in our diverse and dynamic supply chain and ensure we are only working with suppliers who share our values and goals.

Our Supplier Code of Conduct [available here](#) sets the minimum of responsible business conduct and commitment to corporate responsibility expected from those wishing to do business with, or on behalf of, KL Gold. Suppliers, and all sub-contractors working on their behalf, must

comply with our contract terms, including provisions to adhere to our Supplier Code of Conduct, policies and standards. These include human rights, labour standards, environment, local procurement and employment, discrimination, conflict of interest, grievance/complaints reporting, and business ethics. Failure to adhere to the Code of Conduct may be grounds for terminating the supplier relationship.

In 2020, we used third-party risk management software to support our supplier risk screening for onboarding and ongoing monitoring across all

our operations, including corruption and bribery, sanctions exposure, modern slavery and supply chain integrity, and reputational risk. In 2021, we plan to utilize a risk-based, phased approach to implementing our supplier risk management program, including pre-qualification questionnaires related to key ESG topics, risk analysis and segmentation, and mitigation plans, where appropriate.



# SOCIAL



Social





# COVID-19 Pandemic Response

**COVID-19 changed KL Gold's activities in 2020 as we refocused on supporting those who work for us and our communities.**

Faced with extraordinary events, KL Gold rose to the challenge. Moving quickly to ensure the health and safety of our workforce, their families, and the communities in which we work and live continued to be our most important consideration.

While it was a year of uncertainty, we also witnessed a great amount of camaraderie and community spirit as we worked to overcome this together.

Further, through 2020, we provided emergency support in the form of community donations and grants of emergency funding and supplies, with a focus on homelessness, addiction, equality and diversity, senior care and youth training and development.

Across KL Gold, we continue to identify and implement measures to protect our workforce and communities. Processes at a workplace level made sure every worker was screened for symptoms before they attended work as well as restricting non-essential visitors to our workplaces. We developed technology that has reduced our need to complete paperwork, to work in proximity with each other, or to attend remote locations. We have achieved this by utilizing drones for site inspections, consolidating meeting formats and attendance, and utilizing software and new mobile devices. We also established secondary, smaller workplace hubs and helped workers work from their homes during periods of high-community contact potential, or due to a personal vulnerability. By implementing these initiatives,



**Over \$20 Million**

Money allocated in 2020 to support community COVID-19 response

## Our Approach

KL Gold and each of our operations are continuing to manage and respond to COVID-19 within the framework of our pandemic response plans, recommendations of health authorities, and local and national regulatory requirements. Our operations have shared action plans and preventive measures being implemented while seeking and considering input from our employees, contractors, communities and industry peers to ensure we continue to deliver responsive actions consistent with broader efforts.



we are not only keeping our workforce and their families safe, but we are assisting with slowing down potential community transmission, while identifying efficiencies in established processes.

## Looking Forward

COVID-19 has made us all more aware of our own health as well as how our own healthy hygiene habits can impact others. During COVID-19, we saw a rise in the utilization of personal leave due to illness, as workers were more hesitant to attend the workplace with non-COVID-19-related illnesses that could become communal. We hope that this trend continues and workers who are unwell staying away from the workplace becomes the new normal.

Short-term solutions are now being replaced with permanent infrastructure. This includes hand washing facilities, hand hygiene stations, and ergonomic spatial requirements. This will be how we do business going forward. The health and safety of our workforce, their families, and the communities in which we work and live will always be our most important consideration.



**“Our most significant achievement in 2020 was our extensive response to COVID-19, which clearly demonstrated that, at KL Gold, nothing is more important than the health and safety of our people and the responsible operation of our business.”**

— Tony Makuch, President and Chief Executive Officer of KL Gold





### Providing Critical Supplies

As the COVID-19 outbreak continued to evolve in the communities surrounding our operations in Canada, a key challenge became the availability of and access to critical supplies and equipment, including Personal Protective Equipment (PPE) such as medical grade gloves, masks and consumables like hand sanitizer. We used this as an opportunity to support essential community initiatives and care organizations. Partnering with

community groups, we assisted in donating supplies to aged care homes, medical facilities and early childhood services.

In Kirkland Lake, we granted CAD \$100,000 to the local Rotary Club for the purchase of foggers and air purifiers for all area schools and daycares, and an in-kind donation of hand sanitizer to services and businesses such as local fire and emergency medical services, local police, grocery stores and daycares.

In Cochrane, we donated \$10,000 for PPE for the local business and essential service community.

We also supported a local microbrewery, Underground Brewing in Kirkland Lake, to help transform their business to manufacture hand sanitizer. By providing the funding for the transformation, the township of Kirkland Lake established a supply chain of basic hygiene products which were donated to any member of the community in need.



Photo credit — Lisa Greer



### **Mobilizing Front Line Workers**

As COVID-19 infiltrated communities and began to consume public resources, KL Gold provided work leave for our employees with specialized skills so they could continue to provide support to their communities. We are proud of our employees who used their workplace skills to assist Care Flight (critical medical air support), Ambulance Victoria and the Australian Defense Force—COVID-19 response unit. The services they provided either directly supported pandemic response or essential critical care.



### **Supporting Vulnerable Populations**

Infectious disease epidemics and pandemics have a disproportionate impact on people experiencing poverty, marginalization, stigmatization, discrimination, or who have limited access to health care resources. This includes certain Indigenous communities near our operations that were identified as vulnerable due to socio-economic factors and limited access to screening services. To help, KL Gold invested in establishing a medical clinic to ensure safe and secure screening of Indigenous personnel. Although not part of the registered testing network, the facility provided screening support to limit community transmission and the initiative helped remote and Indigenous communities manage the threat, while providing access to medical care and screening.

The vulnerability is also particularly relevant for individuals who experience homelessness. Homeless shelters are an ideal environment for transmission because of shared living spaces, crowding, difficulty achieving physical distancing and high population turnover. The City of Timmins asked for our support in providing spaces for people experiencing homelessness, to ensure physical distancing, isolation or quarantine. In June 2020, KL Gold provided a CAD \$556,321 grant to the Cochrane District Social Services Administration Board, which administers 23 agencies that provide a variety of services, such as homeless shelters and food banks, emergency medical services, special needs resourcing, family resource centers, and housing units.



### **Fosterville Mine Gravity Expansion—Commissioning in 2020**

Our Fosterville Mine team has been working to commission the second SAG Mill Primary Knelson Concentrator in the gravity circuit since the end of 2019. In the middle of this important project, due to the global impact of COVID-19 and border restrictions, standard approaches in fault-finding and commissioning forced our team to think outside the box and adopt new ideas to keep employees safe and projects on target.

To bring the new concentrator online, the commissioning team heavily relied on engineers and specialists who were not local. To help facilitate this important work while avoiding unnecessary travel, KL Gold turned to Microsoft HoloLens® smartglasses. Using holograms displayed on the screen of the glasses, the commissioning team were able to communicate directly with engineers on the other side of the country and communicate their requirements. This opportunity introduced us to the benefits of this advancing technology and how KL Gold sites can engage with others in the field; enabling a quick and efficient means to improve productivity.





### One-year LTI Free

In 2020, Detour Lake Mine achieved a major milestone for KL Gold with over one year Lost Time Injury (LTI) free. Given the challenges of 2020, which also include the unsettlement of acquisition, the leadership of Detour Lake Mine have sustained a workplace where no incident occurred where a worker was incapacitated to the point of not being able to return to the workplace in any capacity.

## Health and Safety

To support our commitment to providing a safe place of work, KL Gold has programs designed to prevent harm, monitor for exposures as well as respond quickly to unplanned outcomes.

### Our Performance

KL Gold's safety performance is trending in the right direction. The results of our employees' efforts to improve their performance and their workplaces are reflected in our statistics.

### Systems and Culture

We want to lead the way, so we have worked hard to ensure the standards at which we work exceed industry standards and regulatory requirements.

As a company, we are exploring how to do safety differently. This means building a culture of trust—where we provide the workers with a safe environment, quality equipment and interactive training; in return, our workers complete the tasks they are assigned to the best of their ability and with pride in their workmanship.

In 2020, we introduced Managing Vital Performance, our in-house behavioural safety program, to Detour Lake Mine as well as our new employees and business partners. This program monitors our behavioural expectation for

general and high-risk activities, which supports ownership of the workplace by workers and their supervisors.

### Hazards and Risk Assessment

Proactive risk management underpins all we do at KL Gold. We incorporate risk and hazard identification in all our operational processes to ensure safe, sustainable, and successful outcomes.

In 2020, each of our operations focused on ensuring the Major Mining Hazards were being controlled to as low as reasonably practicable and that all critical controls were part of a critical control verification audit and assurance program. This audit schedule provides accountability as well as assurance to our stakeholders that work is being conducted to the highest standards and we are continually seeking ways to improve our processes using technology.





### TMIFR

(@200,000 hours worked)

**2.5 (down from 3.6)**



reduction in the  
severity of injuries

**down 40%**



reduction in potentially  
fatal incidents

**down 15%**



### TMIFR vs Severity FR

The purpose of our IMS and Safe Systems of Work program is to provide workers with a workplace free from uncontrolled hazards and risks.

In 2020, the senior leadership worked not only to reduce the Total Medical Treatment Incident Frequency Rate (TMIFR), but we also started to monitor a different metric, the Injury Severity Rate. This is calculated on the number of altered or incapacitated shifts due to a workplace injury/ illness based on 200,000 hours worked.

With changes to onsite medical management and on-site allied health professionals to support injury management, as a business we reduced the injury severity rate from 65.8 to 40.5 in the previous 12 months. This means our workers not only returned to their regular work quicker, but more importantly returned to full health to be with their families and enjoy life sooner, rather than being restricted by a workplace injury or illness.





### Reduction in Serious Incidents Across the Business

In 2020, as a business we dedicated energy to reviewing our high-risk activities and exposures to continually search for new and improved ways to ensure safe production. A measure of success has been to monitor the frequency of Serious Potential Incidents (SPI)—these are unplanned events that had the potential for a Major or Catastrophic outcome. Utilizing the same formula for frequency rates, in 2020 we recorded a SPIFR 0.3, which significantly reduced from 2.9 in 2019.

We achieved this by thoroughly investigating unplanned outcomes to ensure that our risk management is increasingly better understood by all. We increased focus on conducting incident investigations at all levels and ensuring action plans to prevent recurrence were monitored for completion and effectiveness.

# 3,000+

hours of Emergency  
Response Training by  
Workforce in 2020



### Supporting Local Emergency Response

Being a close community partner, the Fosterville Mine Emergency Response Team is considered a support service in times of crisis in the community surrounding the mine site. In 2020, the community rallied around a family when an unwell elderly man went missing. Fosterville Mine provided a team of highly trained search and rescue volunteers to join the search under the control of the Victorian Police. For two days, they provided a field-based search until the missing person was found and reunited with his family.

### Emergency Planning

While we establish safe work, unfortunately we know there is the potential for unplanned outcomes. At KL Gold our risk processes extend to business continuity planning as well as rehearsed emergency response protocols.

At each site, we have teams of dedicated volunteers who commit their own time to learn and practice skills to respond when a failure occurs. In 2020, these dedicated workers spent over 3,000 hours being trained and mentored by professional emergency responders. These professionals have developed first response protocols supported by specialty equipment and external industry best practice training.

### Wellness at Work

The wellness of our workforce is of the utmost importance. Each site has an annual occupational hygiene program designed to monitor for exposure to known harmful substances and environments. We are proud to report that there were no recorded harmful exposures or exceedances in 2020.

Along with monitoring the workplace for known health hazards, we also provide support for workers' general physical and mental health. Each of our operations delivers mental health first aid training to workers and leaders so they are not only aware of warning sign in others, but also themselves. Using our site-based health teams of medical and allied health professionals, we proactively educate and monitor workers' health, which can identify emerging general health issues.

# Our People

KL Gold seeks to be an employer of choice, a place where people want to work because it is meaningful, offers purpose, and one where an individual contribution is acknowledged as part of a team effort.

To bring consistency to our approach, an enterprise-wide recruitment standard was adopted in 2020. The benchmarks we apply during recruitment and onboarding provide an emphasis on fostering long professional relationships that maximize retention.

We also introduced an Organizational Values and Employee Engagement Survey across all our operations to benchmark employee engagement and satisfaction, process improvement, personnel and team development, communication, teamwork, and leadership. Results will enable KL Gold to understand our workforce and inform our decision-making to ensure we continue to attract diverse talent, provide meaningful opportunities for employees, and encourage everyone to contribute their full potential.





## Diversity and Inclusion

KL Gold recognizes the importance of diversity of culture, age, race, gender, and sexual orientation within its workforce. A multitude of perspectives and diversity of thought has a direct and positive impact on productivity and creativity. This ultimately results in greater success as a business.

KL Gold is an equal opportunity employer and ensures that our labour practices are gender neutral and nondiscriminatory. Discriminatory practices and harassment are not tolerated and any reported instances are formally investigated with appropriate disciplinary action taken.

This is reflected with the implementation of our Diversity, Equality and Inclusion Policy across our company in 2020 that reinforces our belief that equality and inclusion are core to our culture. In addition, our Detour Lake Mine has mandatory Cross-Cultural Competency training for all personnel on site led by our site-based Indigenous Affairs team. In 2021, we look forward to implementing regular Cross-Cultural Competency training for management at Macassa Mine as well. This training is intended to nurture and grow internal competencies in order to be positioned as employer-of-choice for local Indigenous Nations, to better recruit and retain Indigenous workers, and build trusted and prosperous partnerships and relationships with our local communities.

KL Gold understands that this progress is only part of the effort

required. We are working diligently to understand how to better support our Indigenous employees while continuing to grow local contributions. In 2021, we will continue to progress our efforts by developing a guiding policy, standards and management plans.

## Labour Relations

KL Gold values a direct relationship with all employees, and a fair workplace for all. The workplace is one where freedom of association is acknowledged in step with our Employee Code of Conduct and Ethics, which are refreshed with all staff members every year.

Fewer than 12% of our employees are tied to an industrial agreement, the majority of employees having direct representation through other forums such as safety committees and department meetings. All employees are encouraged to speak up, share suggestions, and identify areas of improvement.

The company's Whistleblower Hotline provides a confidential mechanism through which complaints and concerns about our activities can be raised. Complaints are protected from sanction or retaliation under the Company's Whistleblower Policy and Code of Conduct and Ethics. Whistleblower services are managed by a Third Party and available by email or anonymous toll-free telephone calling from all of our locations, and are available in English and French to increase accessibility.



## Percent of Workforce who Self-Identify as Indigenous

Detour Lake Mine:

**20%**

Ontario Mining Association Average:

**11.2%**

Canadian Labour force (25 over):

**3%**

### Sources:

Position Paper: Relations with Indigenous Communities, Ontario Mining Association. Issued: November 19, 2020.

Statistics Canada, 2020. Table 14-10-0365-01 Labour force characteristics by region and detailed Indigenous group (x 1,000).



In 2020, KL Gold did not experience any significant disputes at any of our sites. Zero days were lost to industrial action.



Wages and benefits are reviewed at least annually with benchmarking to industry standards.

### Development and Training Programs

To promote retention and ongoing development of our personnel, our performance management approach includes at a minimum annual performance evaluations. In addition, annual refresher training and goal setting for employees make up a continual cycle that ensures everyone is aware of the key factors for success.

KL Gold supports 35 active apprentices, including Millwrights, Pipe Fitters, and Instrumentation and Automation professionals. Our career path planning is one

where just under 20% of roles are filled internally, which assists with business continuity. We are also able to offer employees career development in job roles where they may be able to ‘grow into’ the role with appropriate support.

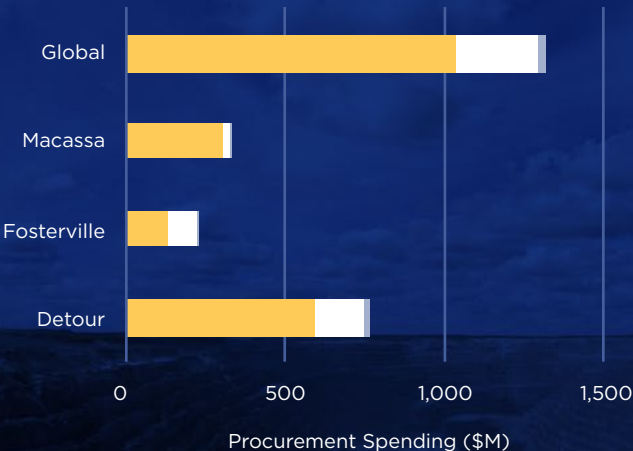
### Maximizing Local Employment

There were 450 new roles created over KL Gold operations in 2020. The greatest of these was Detour Lake Mine with 186 positions, and Macassa Mine and Fosterville Mine with 138 and 132 respectively. We spent

\$306 million in total wages in 2020, \$238 million in Canada and \$68 million in Australia. Most of those wages staying in the communities where we operate, where over 90% of our workforce is considered local for our Fosterville and Macassa Mines. In addition, 76% of our procurement spend, or \$905 million, was spent in Ontario and Victoria in 2020. KL Gold recognizes that where possible and practical to do so, building local capacity by supporting local businesses is how we can best support the communities in which we operate.

### Total Spend on Goods and Services

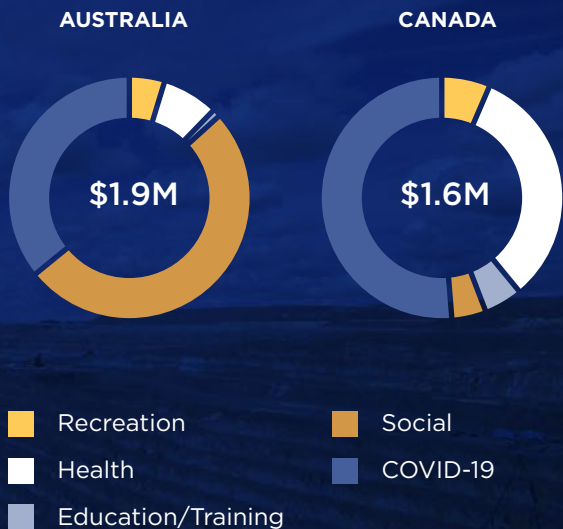
**76%** spent in Ontario and Victoria  
or \$905 Million



- Ontario and Victoria
- National
- International

### Total Donations

**\$3.5M** total







▲ **Xena Echum:** Mobile Maintenance Dept.  
Mechanical Helper Shovels and Drills/  
ERT member/Moose Cree Member

◆ **Shawn Ouellette:** Mobile Maintenance  
Dept. Level 3 Apprentice/Taykwa  
Tagamou Nation Member



### KL Gold Offers Local Apprentices a Secure Future

KL Gold employs apprentices at its core assets. Our Detour Lake Mine has a program that allows potential apprentices to try work in the trade before embarking on a solid pathway to a Red Seal/Accredited trade career.

Employees can enter the workforce as Mechanical/Trade Assistants where they get to experience all aspects of the role and

decide whether a trade is the career for them. “This program is primarily geared to indigenous people from the communities where we operate and can provide a secure future for participants by building skills for a career that can last a lifetime,” said Lindsay Anderson, HR Manager, KL Gold Detour Lake Mine.

2020 Site Apprentices	Electrical	Mechanical	Millwright/Fitter	Instrumentation/ Automation	Total
Totals	13	15	4	3	35
Macassa Mine	9	8	2	3	22
Detour Lake Mine	2	4	2	0	8
Fosterville Mine	2	3	0	0	5



### Recognizing Excellence

Fosterville Mine's Processing Manager, Sue Mills, was awarded the 2020 Exceptional Woman in Victorian Resources Award. The award is an outstanding achievement and recognition of Sue's tremendous contribution to the resources sector and efforts to champion diversity across the entire resources industry.

Sue has worked at Fosterville Mine for the past 10 years and has recently taken on the role as Processing Manager for the site. Her career began as a Furnace Melter at the BHP steelworks in 1993 and it is testament to her hard work and self-belief that she has been able to achieve such success.

In addition, Mohammed Ali, Vice President of Environment for KL Gold, was the 2020 recipient of the Excellence in Sustainable Development Award from the Canadian Institute of Mining, Metallurgy and Petroleum. The award recognizes an individual or organization for excellence in sustainable development as voted on by peers of professionals in the Canadian minerals, metals, materials and energy industries.

Mohammed has over 20 years of experience as a sustainability executive in the mining sector. He specializes in environmental management, life cycle assessment, integration of environment and social concerns in process design and permitting, and GHG measurement and reporting. He is active in external environmental and sustainability initiatives and committees, and values his role mentoring younger professionals.



▲ Sue Mills: Processing Manager for Fosterville Mine



▲ Mohammed Ali: Vice President of Environment for KL Gold



# Community and Indigenous Relations



## Managing Social Impacts

Mutual respect and trust with our local communities is critical to our success and a key requirement of our responsible approach to mining. Through our engagement and development activities, we strive to deliver sustainable long-term benefits to our local communities to support and respect their rights and aspirations.

Our [Social Responsibility Policy](#) outlines our approach to working with communities, government and other stakeholders. It affirms our commitment to developing partnerships that are mutually beneficial over the life of our projects and mines.

## Stakeholder Engagement

Our broad range of stakeholders reflects the diversity of our operations, activities and industry. Engagement with our key stakeholders helps enhance our mutual understanding of interests, concerns and objectives, while also strengthening the relationships throughout the mining life cycle. Our aim is to involve our stakeholders in decisions that affect them and to understand their point of view. To achieve this, we build and maintain open, inclusive and constructive relationships with all stakeholders through listening, respectful



dialogue and integrating diverse perspectives into practical solutions.

Our engagement methods are tailored to suit stakeholder needs—we use formal and informal processes, depending on the relationship and communication context. We work closely with our employees and business partners, local communities, governments and regulators, shareholders and suppliers. Direct engagement with local stakeholders includes information sessions, open dialogue and access to grievance reporting mechanisms.

We continue to implement our Indigenous, Communities & Stakeholder Standard, which provides a guideline to facilitate effective and consistent implementation and quality across our operations.



Due to the location of our assets, resettlement is not required.



### Northern College Research Facility Support

A new Innovation Hub being developed at the Northern College Timmins Campus received a big boost when KL Gold contributed CAD \$500,000 in December 2019. The new 24,000-square-foot research facility is scheduled to open in the spring of 2021. Programs provided at the Innovation Hub will not only benefit students but also industries looking for skilled workers and technological advances.

“We’re not really making a donation here, we’re making an investment,” says Tony Makuch, President and CEO of KL Gold. “We’re planning to be mining gold ... for many, many years. To do that, we need to be embracing technology and changing. This is an investment by KL Gold into the future of where we can take things.” Northern College says alternative energy will be a key focus for the facility, as will green technologies like solar, wind and geothermal power.



KL Gold made it possible to evolve our binder business as a real, sustainable business that we can springboard to other economic development and create tangible benefits for our Nation and its members. Our relationship with KL Gold made it all possible, and we commend their leadership with helping our community and our businesses prosper.”

— Chief Jason Batisse, Matachewan First Nation



Community Response Mechanisms

KL Gold uses a Community Feedback Standard for our site-level procedures to ensure our stakeholder engagement strategies align with our standards.

All complaints are acknowledged and assessed, and a response is communicated to the complainant. We work on replying and resolving issues promptly. In 2020, we received a total of 21 complaints for all our mining sites. Most of the complaints made in the year were related to nuisance of mining activities (vibration, dust, noise) or health and safety (road traffic).



Global Complaints

Vibration:

18

Wildlife:

1

Noise:

1

Property Damage:

1



Building Successful Relationships

Although our Macassa Mine began operation in 1933, as part of our recognition of Indigenous rights and territories in which we operate, we signed an agreement with Matachewan First Nation and Wahgoshig First Nation in 2017, one of the few in Canada for a brownfield site, and one which we are extremely proud of.

One success of these relationships has been KL Gold’s use of a backfill blending facility in North Bay, Ontario. The facility was established to service mines located in Matachewan First Nation’s traditional territory by MFN Limited Partnership (MFNLP), the community’s business arm. MFNLP intends the 100% community-owned, controlled, and self-performed backfill (binder) business to become a life-of-mine supplier of choice for underground mines across Northern Ontario.

As we recognize the importance of participation of Indigenous peoples in natural resource development, our approach has always supported community-owned businesses that provide sustainable benefits and capacity-building to the broader community. As such, KL Gold has concluded a three-year binder supply contract with MFNLP for our Macassa Mine estimated to be worth CAD \$9.7 Million.

## Community Investment

In 2020, our community investment programs continued to target initiatives that ensure the communities in which we operate benefit from our presence. Our goal is to maximize KL Gold's and our host communities' return on our investments in strategic health, capacity building initiatives, and economic development programs. In 2020, our operations spent a total of \$306 million in wages and benefits, \$905 million in supply chain purchases in Ontario and Victoria, and \$3.5 million in community investments through sponsorships, donations, scholarships and grants.

**Funding announcement:** Jacinta Allan, Victorian Minister of Transport and Infrastructure, Felicia Binks, Director of Environment and Government Relations KL Gold, and representatives of the Junortoun Fire Brigade. ▶



### Supporting Those in Need

Every summer, bushfires have far-reaching social and economic impacts on regional communities. The KL Gold operations in Australia were not directly affected by the Black Summer Bushfires of 2020; however, it was clear the long-term impacts would be felt for many years to come and in many regions. KL Gold donated AUD \$1.0 million towards the massive relief and recovery efforts required in the aftermath of the fires.

The donation was divided equally to the following four appeal funds:

- Government – Victorian Bush Fire Appeal
- Australian Red Cross
- Victorian CFA
- RSPCA Victoria

KL Gold also established the Bushfire Readiness Grants program in collaboration with

the District CFA. Approximately AUD \$400,000 was allocated to the CFA in support of eight local brigades in the Bendigo-Axedale-Goornong-Huntly region, near the Fosterville Mine. The aim of the program is to improve bushfire readiness through the supply of additional firefighting or support equipment.



## Community Contributions

KL Gold contributes to the prosperity and sustainability of our local and regional economies. We continue to invest in social, educational, environmental and recreational programs that benefit local communities. KL Gold looks to identify and support projects that benefit as many community members or meaningful groups as possible within the communities where we operate. A portion of the funding goes towards initiatives that encourage active, healthy lifestyles. KL Gold also sponsors groups, events and facilities to build relationships and positively impact the communities near our operations.

In 2020, KL Gold donated over three million dollars in the regions where we operate to various charitable and not-for-profit organizations. Our operations provide ongoing support for local food drives, health organizations, hospitals and local curling, golf and other sports and recreational facilities. We are proud of our employees who are active volunteers in our communities.

**Top:** Bendigo Blue Light coffee van visiting Fosterville Mine (November 2020).

**Bottom:** Local youth playing games at a Blue Light program. ▶



### Bendigo Blue Light

Fosterville Mine recently established a two-year partnership with the Bendigo Blue Light, a local volunteer organization providing support to the region's youth, particularly those that are vulnerable or at risk of engaging in anti-social behaviour.

The organization was re-established in 2015, having originally begun in 1976. The Bendigo Blue Light brings together both Police and community members who share the common goal of making a difference in the lives of young people.

During 2020, the partnership enabled the establishment of a youth drop-in centre, free memberships for youth to access Blue Light programs and the purchase of a mobile coffee van/juice bar. The van provides an opportunity for youth to develop skills and gain confidence, with the goal of long-term employment. The Fosterville Mine hosted the van onsite in November with employees able to share in the success.





### Maximizing Our Local Supply Chain

One of the ways value flows from KL Gold to local communities is through the use of local suppliers. Where feasible, KL Gold buys local goods and services from locally based suppliers as a way of supporting the economic vitality of our communities. Local suppliers must meet the same criteria that all other potential suppliers must meet to do business with our company. Where safety, quality and service are comparable, preference is always given to local and Indigenous suppliers.

Our Canadian operations spent \$686.4M in Ontario, which represents 87% of their total spend for 2020. At the Detour Lake Mine, we engaged with 17 different companies that had joint ventures with Indigenous communities in 2020. At the Macassa Mine, we engaged with wholly Indigenous-

owned businesses relating to exploration and underground drilling, underground contracting, earth and civil work, and backfill binder.

At Fosterville Mine, we spent \$103.1M in the Victoria area, which represents 64% of its total spend for the year. Spending in both regions is a testament to KL Gold's commitment to procuring goods and services from local businesses and suppliers as much as possible.



**Goods and Services  
from Companies  
with Indigenous  
Ownership**

Total Spend

**\$263  
Million**





**Total Payments  
under Agreements  
with Indigenous  
Communities**

**\$9.3  
Million**

## Engaging with Indigenous People

The dynamics and expectations of communities and Indigenous Peoples for the mining industry have changed dramatically in the last decade. Fostering positive and collaborative relationships with local communities is essential for building the foundations of a successful project. Failure to acknowledge and address Indigenous concerns would pose a enterprise risk to an operation and is harmful to the industry.

KL Gold supports the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP) and applies its principles, norms, and standards through our Indigenous, Communities & Stakeholder Standard. Our approach focuses on establishing

mutually beneficial, collaborative and productive relationships. In 2020, in spite of the challenges of COVID-19, a key component of our commitment was our continued early and meaningful engagement with Indigenous Nations and the building of respectful relationships in a safe and culturally appropriate manner. As of March 2020, direct community outreach, such as in-person meetings and visits, were cancelled as a result of COVID-19, and most Indigenous communities were closed to outsiders. As a result, online meetings and video-conferencing were identified as their preference in following public-health guidelines.



### Change of Discharge Location at Sunday Creek

In 2018, it was identified that the Detour Lake Mine required a new location for discharge. Based on predictive modeling, the preferred location to relocate discharge was determined to be Detour River. However, as with any material change at the site, we work with our Indigenous Partners to engage and incorporate feedback where feasible. During our engagement, it became evident that it was the preference of our Indigenous Partners to discharge to Sunday Creek instead. Although this location presented technical and scheduling challenges, KL Gold and our Indigenous Partners worked collaboratively with the government and have developed a plan to discharge into Sunday Creek by 2023.



As part of our Canadian operations, KL Gold is signatory to several agreements with Indigenous Nations, intended to help foster meaningful and mutually beneficial relationships and ensure that the company's operations are respectful of Indigenous rights, cultural beliefs and aspirations. The agreements provide benefits that include training and education, access for Indigenous businesses to contracting opportunities with KL Gold, environmental monitoring and information sharing, access to employment opportunities, and financial compensation.



### Community Fisheries Projects

The West Detour Project is a planned expansion at the Detour Lake Mine site. The layout of the proposed project was developed in collaboration with our Indigenous Partners and mine design team that started in 2015. The objective was to minimize the footprint, protect waterbodies and design for closure. The successful design layout focused on all these objectives and in particular has saved over 4.5 ha of waterbodies through collaborative consultation. In addition to recreating 28 ha of new fish habitat, KL Gold committed to additional community-based projects of choice within the communities.

One of two such projects is the reintroduction of habitat in Lake Whitefish, which was proposed by the Wahgoshig First Nation during engagement sessions focused on fish habitat offsetting and compensation. Traditional Knowledge collected from community members has documented a historic presence of Lake Whitefish (*Coregonus clupeaformis*) in Sunday Lake. The project will study and recreate a habitat suitable for fish, then transfer adult fish from Detour River to Lake Whitefish and perform ongoing monitoring.

The second project is with Taykwa Tagamou Nation, who proposed a traditional and

scientific investigation to better understand and manage the fish resources of Takwata Lake. The lake is a large waterbody (488 ha) with strong cultural and sustenance value to the community, and it has been noted by the Taykwa Tagamou Nation that the abundance of valuable sustenance species (mainly Walleye) has been in decline. KL Gold proposed support for a detailed and comprehensive research program and fisheries management plan for the lake in coordination with the Taykwa Tagamou Nation.





### Cultural Heritage

Protecting Indigenous and historical cultural heritage is a critical element of our management practices. Prior to any development, we conduct archaeological assessments to ensure cultural and heritage rights are protected. We work with Indigenous Nations to identify and preserve cultural heritage sites and to incorporate Traditional Knowledge studies where appropriate.

In Canada, our agreements with Indigenous Nations outline mutual commitments and responsibilities to engage and consult on cultural resource surveys, and identifications of culturally sensitive sites, among many other environmental provisions. The agreements provide substantive avenues for Indigenous Nations to discuss with KL Gold regarding environmental matters, from the earliest stages of our projects to closure and reclamation.

While the agreements include confidentiality clauses, they do not prohibit the signatory Indigenous Nations from engaging directly with government regulators on their issues of specific concern. Nor do our agreements restrict the Indigenous Nations from publicly opposing company activity that may irreversibly impact cultural heritage sites.

### World Heritage Sites

Although we currently do not operate in areas designated as World Heritage Sites, we recognize the importance of preserving and protecting these areas of significance. KL Gold does not currently mine and will not explore or seek to develop new mining operations in areas designated as World Heritage Sites.



At Fosterville Mine, KL Gold undertook a cultural heritage assessment in 2017. Based on findings, we developed and implemented a Cultural Heritage Management Plan (CHMP) in relation to the construction of a new tailings dam, which will be located within 200 metres of an ephemeral waterway (Gunyah Creek). The location within an area of cultural heritage sensitivity constitutes a high impact activity, as defined in Australia's Aboriginal Heritage Regulations.



# ENVIRONMENT

Environment



# Energy and Climate Change

**KL Gold recognizes climate change as a strategic risk with potential financial implications for our company, our supply chain, and our investors. It is one of the most pressing global issues facing our society and is a priority issue for our stakeholders.**

From the mine to the mill, we also recognize that our business is energy-intensive and generates

greenhouse gas (GHG) emissions that contribute to climate change. As such, we integrate climate change considerations into our business strategy through strong governance and risk management. We empower sites to develop and implement actions to reduce emissions and increase energy efficiencies, by improving electricity efficiency, implementing low-carbon technologies and using clean energy sources. Lowering emissions and improving our energy efficiency provides us with cost savings and environmental benefits within and beyond our operating boundaries.

“

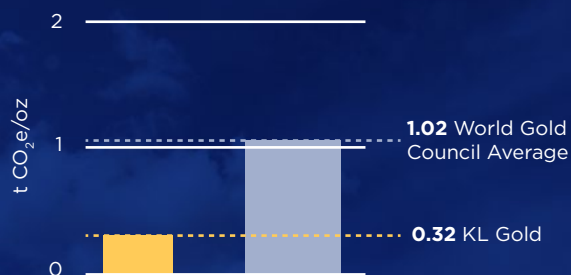
The Macassa Mine is really the only mine in Ontario and Canada where most of its production facilities are powered with battery-operated equipment...We had to wait for the industry to catch up. And for the supply industry to catch up, we would have to wait a number of years. We decided we'll be the guinea pigs. We'll take the prototypes.”

— Tony Makuch, President and Chief Executive Officer of KL Gold



## Net-Zero GHG Emissions by 2050, or sooner

KL Gold is a recognized leader in greenhouse gas performance, including one of the lowest GHG intensities in the industry.



## Our Approach

KL Gold is committed to combating climate change and energy efficiency and reporting. These obligations include implementing governance, engagement and disclosure processes, advancing site-level adaptation and mitigation solutions, engaging with communities and others in the value chain, monitoring and disclosing our Scope 1 and 2 emissions, and improved understanding of our Scope 3 emissions.

### Carbon Accounting

We maintain an auditable inventory of Scope 1 and 2 carbon emissions to monitor progress and report transparently to our different stakeholders. We have developed carbon inventories for all our operating sites to support the evaluation of low-carbon opportunities.

### Optimization of Energy Consumption

GHG emissions are directly related to the type and amount of energy that we consume. Carbon considerations are integrated into decision-making to maximize use of lower-carbon energy sources and improve our operations' energy efficiency.

## Carbon Reduction in Operations

Using specific initiatives aimed at reducing specific GHG emissions, including implementing low-carbon technologies and using clean energy sources, KL Gold is continually evaluating opportunities to reduce carbon throughout its operations and portfolio.



### The Value of Battery Electric Vehicles

In 2011, the Macassa Mine was an early adopter of the battery electric movement with electric scoops being deployed at the underground operation. The Macassa Mine now utilizes 22 scoops and six trucks. Notably, in 2019 we commissioned the world's first zero-tailpipe-emission 40-tonne truck underground, which was built in partnership with KL Gold. Being an early adopter, we were able to suggest many design improvements and provide feedback on the first prototype. This will help make this technology more commercially viable for other operations and the industry as a whole. Zero-tailpipe-emission vehicles, such as the Z-40, are a critical part of Macassa Mine's greenhouse gas intensity performance, which at 0.06 t CO<sub>2</sub>e per ounce of gold produced is amongst the lowest in the industry.



Our Performance

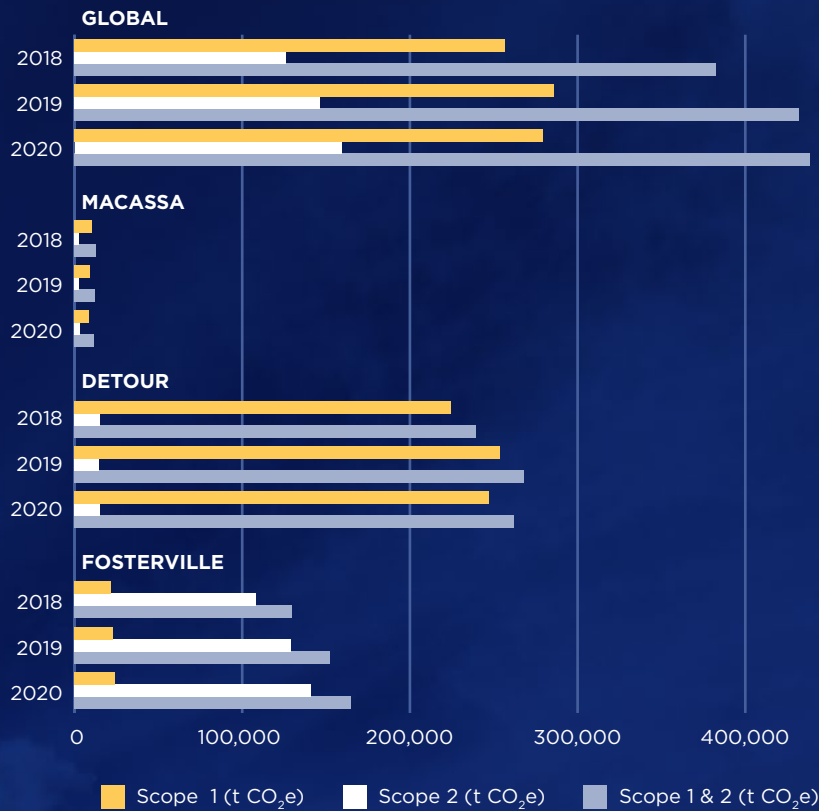
In 2020, our operations direct emissions (Scope 1) were 279,000 tonnes of CO<sub>2</sub>e or 64% of our total emissions during the year. Emissions intensity per ounce of gold produced increased during 2020 to 0.32 tonnes CO<sub>2</sub>e per ounce of gold produced, which is 67% lower than the WGC average. As part of our commitment to utilizing clean energy sources, we plan to investigate the potential to introduce solar, biodiesel and hydrogen fuel cell energy sources at our operations. We are committed to transparent disclosure of our impacts, and as part of this, we plan to respond to the CDP carbon questionnaire in 2021.



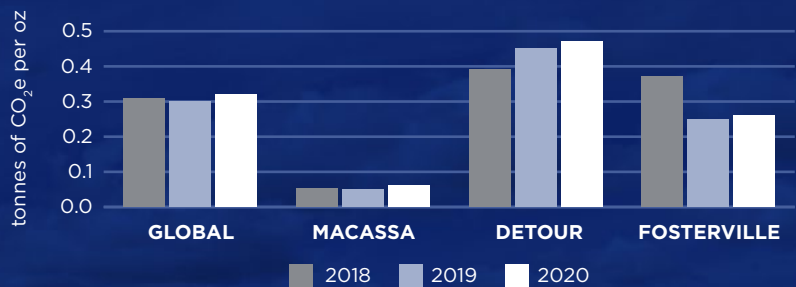
Biodiesel Trials at Detour Lake Mine

One of the immediate advantages of having Detour Lake Mine as part of KL Gold was the sharing of best practices from each respective site. As Detour Lake Mine is a large open pit operation, the use of surface diesel trucks is prevalent. Since Macassa Mine has experience in the use of biodiesel blends at their operations, that knowledge was brought over to Detour Lake Mine to pilot biodiesel blends on a select few of our mid-sized support equipment. The logistics of biodiesel purchase, storage and use were quickly developed with collaborative efforts from both Detour Lake Mine and Macassa Mine. Although the colder weather proved challenging for the initial biodiesel blend, the teams have not given up on biodiesel, or on looking for alternatives to reduce GHG emissions. A positive from this trial is it has formed a cross-site collaborative culture for innovation and we look forward to what's to come.

Greenhouse Gas Emissions – Total Emissions



Greenhouse Gas Emissions – Intensity



## Climate-Related Risks and Opportunities

KL Gold considers climate-related risks from a policy, market, reputational, technology, financial, and physical perspective. Our goal is to consider climate-related risks and opportunities and their short- and long-term implications in the evaluation of all parts of our operations. Even though KL Gold's emission intensities are low when compared to the industry standard, this is a priority.

KL Gold recognizes that global and national trends show an introduction and escalation of a carbon tax. To understand the potential financial risks, a robust

direct (Scope 1) and indirect (Scope 2) accounting program has been developed. We also appreciate upstream (Scope 3) emissions are an important element to understand. We have been collecting data and building databases of emission factors of upstream emissions to understand our carbon footprint from a cradle-to-gate lifecycle perspective. Although our exposure to carbon tax is lower than others in the industry due to our lower emissions intensity, we have put forward short- and long-term plans to decarbonize our operations by 2050. These

include consideration of renewable energy, renewable fuel and hydrogen fuel adoption.

With respect to physical risks, our operations are located in very different climate regions. Our Fosterville Mine operation, which has a drought risk, is not reliant on local freshwater and draws municipal grey water for use at the operation. Our Canadian sites, in recognition of increased precipitation risks, have raised the dam heights or increased water diversion measures to allow for increased stormwater events and spring freshet.



### Macassa Mine Second Life Battery Program

Macassa Mine has been operating Battery Electric Vehicles (BEV) since 2011 to mitigate the economic and environmental effects associated with the operation of a diesel fleet underground. Being an early adopter of the battery electric fleet, our batteries are ahead of the curve in reaching their end of life. To date, many battery packs have been retired and replaced due to infrastructure and performance demands. Despite this, the Lithium Iron Phosphate cells within these retired packs still have potential to be useful in other on-site applications. In 2020, 400 of these retired cells were tested and it was determined that 60%

of the batteries were adequate to serve in other applications, such as energy storage systems to offset peak power demands. The Second Life Battery Project was initiated to perform testing and investigation of secondary uses of these spent batteries instead of sending them to landfills. This initiative has gained wider support and also has received a CAD \$250,000 grant from the Northern Ontario Heritage Fund Corporation, which is aimed at building a battery energy storage system (BESS) from cells that are no longer able to be used by BEVs underground.







# Water Management

**Water is a vital global resource, essential to the well-being of our communities and the environment, while being necessary for our operations.**

Access to safe water is a fundamental human right. We seek to manage water responsibly by protecting water quality and improving our water use efficiency. Our goal is to minimize any potential water-related impacts from our operations and ensure our activities do not compromise any shared water use with our local communities.

## Our Approach

Managing and using water responsibly is a critical component of our operations and overall approach to responsible mining. As part of this, we consider water quality and water quantity as indicators of performance, and understand that each operation's water management strategies will be tailored to manage

individual potential impacts, risks, opportunities and efficiencies. Each of our operations has unique monitoring and treatment demands, based on their location, the season and the on-site process they use.

In Australia, Fosterville Mine is in an area of regional water scarcity, and therefore conservation of surface and groundwater consumption is a large component of the successful overall water management strategy. For our Canadian mines in Northern Ontario, the Macassa Mine operates within a water surplus, thus discharge water quality and water balance inventory management are critical components of the site's tailored water management strategy. For our Detour Lake Mine, the operation is a net-zero process

water discharge site and has implemented processes focused on maximizing water recycling.

## Our Performance

Water is an essential interface between our operations, various regulatory agencies, and our surrounding communities. At each site, we have site specific water management targets based on the local environment. In 2020, we continued to evolve our systems and improve our management of water consumption and use, while expanding our water quality monitoring and analysis programs. We also took steps to ensure internal risk assessment systems are in place to provide a systematic approach and proactive corrective actions to water-related risks.





## Water Use

Sustainable water management and stewardship is using water efficiently, maintaining water quality and engaging with communities to collaboratively manage shared water resources through the mining life cycle. Water reclamation and recycling are key components of our approach to sustainable water management and are implemented across our operations.

Operating in a water-scarce region, Fosterville Mine has developed a custom solution for providing water to the site that benefits the operation and Bendigo's urban water authority, Coliban Water. Makeup water at Fosterville Mine is supplied via the use of Class B recycled water from the Coliban Water's Waste Water Treatment Plant. In 2020, this amounted

to 454,708 m<sup>3</sup>. This provides a meaningful solution to both parties as it allows Coliban Water to deliver recycled water that was previously a waste product and allows Fosterville Mine to minimize its reliance on freshwater resources. Fosterville Mine is also a net-zero process water discharge site.

At the Macassa Mine, 96% of the total water used was reclaimed from tailings, which returned to the Macassa Mill, while the remaining was used for potable water. The total treated effluent discharged from the Macassa Mine was 378,850 m<sup>3</sup>.

Detour Lake Mine is a net-zero process water discharge operation, and reused 97% of its process plant water.



## Site Specific Water Management Targets

### Macassa Mine

Net-Zero Consumption

### Detour Lake Mine

Net-Zero Process Water Discharge

### Fosterville Mine

Net-Zero Process Water Discharge



## Relationship with Local Landowner a Win-Win for Weed Control

KL Gold has worked with a neighbouring landowner to find an effective solution to controlling a highly invasive weed without using chemicals.

Large amounts of gamba grass are a factor in hot, uncontrollable wildfires, so KL Gold controls this weed on our Northern Territory leases. In 2020, KL Gold built 19.5 km of fencing to create three paddocks of 1,100 ha for 2,300 head of cattle that graze in the fenced zone. The one-off long-term fencing cost of \$400,000 matched KL Gold's previous annual spend on herbicide.

KL Gold now requires less herbicide to reduce fire risk and stop weed spread with cattle grazing in the fenced zone now proving more effective.







## Process Water Recycling Rates

Detour Lake Mine

97%

Fosterville Mine

75%

Macassa Mine

96%

## 2020 Water Use and Intensity (m<sup>3</sup>)

	TOTAL	MACASSA MINE	DETOUR LAKE MINE	FOSTERVILLE MINE
Total water withdrawn (m <sup>3</sup> )	12,921,000	3,562,000	8,071,000	1,288,000
Total water discharged (treated and untreated)(m <sup>3</sup> )	3,927,000	2,953,000	975,000	0
Total water consumed (m <sup>3</sup> )	8,994,000	610,000	7,096,000	1,288,000
Total water recycled (m <sup>3</sup> )	21,087,000	769,000	18,954,000	1,364,000
Total water used (consumed + recycled) (m <sup>3</sup> )	30,081,000	1,379,000	26,051,000	2,652,000
% recycled	70.1%	55.8%	72.8%	51.4%
Intensity (m <sup>3</sup> total water consumed/tonnes ore processed)	0.38	1.95	0.31	2.17

Determined based on ICMM Guidance on Water Reporting (March 2017)





**From Mining to Mangos—Contributing to Responsible Water Management**

Due to the combination of unique soil composition, elevation, and favourable climate found in the Northern Territory, some of the best tasting and earliest fruiting mango trees are found in the town of Pine Creek at the Pine Creek Mango Plantation. Using water from a reservoir formed by an open pit on a KL Gold Lease, we contribute to the town and the success of the farm by providing access to a reliable supply of fresh irrigation water during the dry season, while decreasing reliance on other local water resources. The reservoir refills every wet season and the community and farm share use of the water during the dry season, between April and November. The water can be used without treatment to irrigate the farm, town gardens and greenspaces.

LOCATION	AVERAGE WEEKLY CONSUMPTION DURING DRY SEASON (m <sup>3</sup> )
Pine Creek Mango Plantation	8,100
Town of Pine Creek* (Parks and Gardens, Pine Creek School Oval)	3,950

\*via Railway Dam

Council Services Manager Jocelyn Moir says, “If it was not for access to that water, we would not have any parks and gardens.” KL Gold is proud to contribute a small part to the town and farms success, and happy to say the Pine Creek Mango Plantation now has 6,000 trees producing 50,000 mango trays for the season, or over 250 tonnes of local Northern Territory fruit.



Water Treatment

Preserving and maintaining water quality through conservation, avoidance, and in some cases, innovative water treatment solutions is an integral part of our water management strategy. We understand that efficient and effective water

use is an important aspect of site management and component of sustainable operations. If our water quality does not meet the highest standards to protect the environment, it is treated on-site until it does.

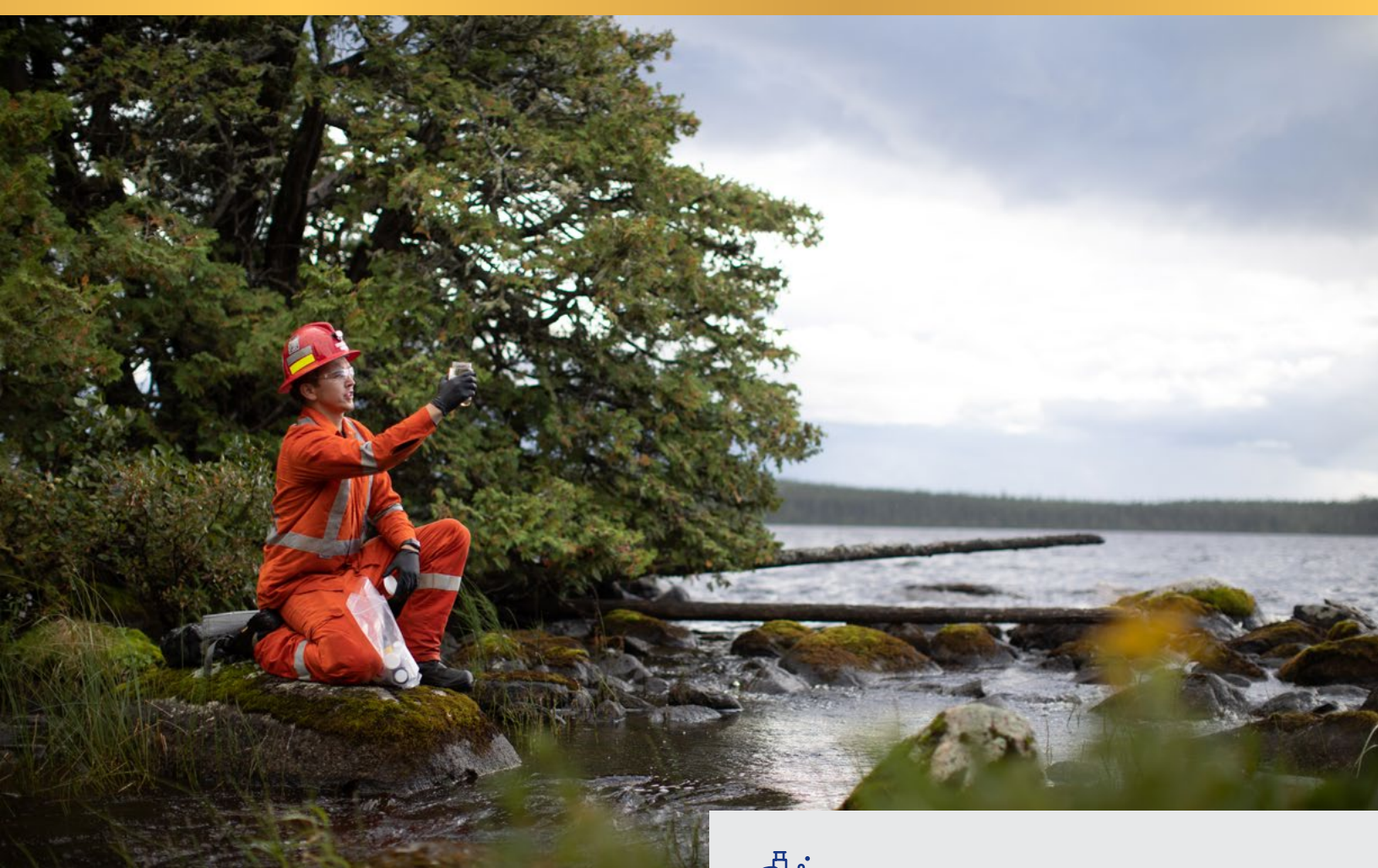
	MACASSA MINE	DETOUR LAKE MINE	FOSTERVILLE MINE	NORTHERN TERRITORY
Water treatment volume	378,850 m <sup>3</sup>	88,264 m <sup>3</sup>	387,184 m <sup>3</sup>	1.21 Mm <sup>3</sup>
Technology	Cyanide oxidation via H <sub>2</sub> O <sub>2</sub> ; iron mud purification	Membrane bioreactor treatment	Ion exchange, ferric chloride precipitation, reverse osmosis	Quicklime treatment



Commissioning of ASTER Plant

Construction and commissioning of the AUD \$9 million Fosterville Mine Activated Sludge Tailings Effluent Remediation (ASTER) plant were completed in November 2020. The project construction was delayed due to COVID-19 restrictions in place in Victoria. The ASTER process utilizes bacteria with the ability to degrade thiocyanate and cyanide species in Carbon in Leach (CIL) water and once treated through the ASTER plant, CIL water is suitable for reuse in processing. Through the use of the ASTER technology, we are able to reuse water, a vital natural resource, for secondary use instead of relying on fresh or potable sources to operate the mill.





### **Water Monitoring**

Across all of our operations, we have implemented comprehensive water quality monitoring programs to gather real-time data and information on our performance, and help inform any mitigation or management efforts that may be required. In 2020, there were no significant non-compliances in water quality recorded at our sites, including cyanide and ammonia species, which are closely monitored and managed. While mercury discharge is less of an issue at our operations, we support the World Health Organization's (WHO's) Minamata Convention, which is designed to help raise awareness about the public health issues related to this naturally occurring element.



### **Implementing New Areas of Research— Stygofauna Studies**

Fosterville Mine commissioned a desktop study into the potential occurrence of subterranean groundwater dependent ecosystems containing Stygofauna within the vicinity of Fosterville Mine.

Stygofauna are invertebrates that live within the groundwater in unconsolidated and fractured rock aquifers. Many different invertebrate groups make up the Stygofauna community, with new species regularly being found as the importance of these aquifer ecosystems becomes better understood.

As this is an emerging area of science, Stygofauna have not yet been studied within the Fosterville Mine region, therefore the assessment of their potential occurrence was based on the current understanding of their environmental requirements. Field sampling for Stygofauna is planned for 2021, with any species of Stygofauna found likely to be new and currently undiscovered.



# Tailings and Waste Management

**KL Gold is a leader in innovation and developing new technologies to improve our performance. For tailings and waste management, this is demonstrated by being the first in our industry to implement deep soil mixing to improve dam safety.**

## Our Approach

The health and safety of our people, communities and the environment are the top priority of KL Gold's comprehensive tailings and waste rock management programs. We recognize that a failure of Tailings Storage Facilities (TSF) and other impoundments at any of our mining operations could cause severe—and in some cases catastrophic—property and environmental damage or loss of life. As such, KL Gold's tailings and waste rock management systems are based on a fundamental commitment to safety and technical excellence at all stages of the mine life cycle—design, construction, operation, closure and post-closure.

### Tailings Storage Facilities

For its active and legacy tailings dams, KL Gold's management approach combines the best practices of the Canadian Dam Association, Mining Association of Canada and the Australian National Committee on Large Dams. Where differences in these organizations' standards exist, KL Gold adheres to the most rigorous of the three.

### Mineral Waste Management

In designing waste rock storage facilities, the emphasis is placed on reducing the risk of Metal Leaching/Acid Rock Drainage (ML/ARD), controlling seepage and runoff, limiting potential pathways to environmental receivers, and preparing for successful reclamation. Confirmatory geochemical testing is performed throughout life-of-mine to ensure proper management and environmental protection.

### Cyanide Management

Each of our sites follows KL Gold global Cyanide Management Procedure to ensure the safe management of cyanide, leach solutions, and cyanide-processed tailings. In addition, KL Gold adheres to the *International Cyanide Management Code for the Manufacture, Transport, and Use of Cyanide in the Production of Gold* (ICMC). The ICMC defines industry best practices, as identified by a multi-stakeholder Steering Committee under the *United Nations Environmental Program* guidance and the former



Tailings are a by-product of mining, consisting of finely crushed rock slurry that has been processed to recover gold, and then transported from processing facilities to management and storage facilities.

Waste rock is material generated through mining that does not contain sufficient levels of gold to be processed economically.

KL Gold does not use mercury during gold extraction. Thus, mercury contamination as a by-product of processing reagents is not an environmental concern.



KL Gold contributes to global knowledge and best practices through its membership with International Network for Acid Prevention (INAP), an industry-led group dedicated to addressing the challenges of ML/ARD in mining. Detour Lake Mine has been shortlisted for the INAP Leading Practice Award, for which the winner will be selected in 2022.



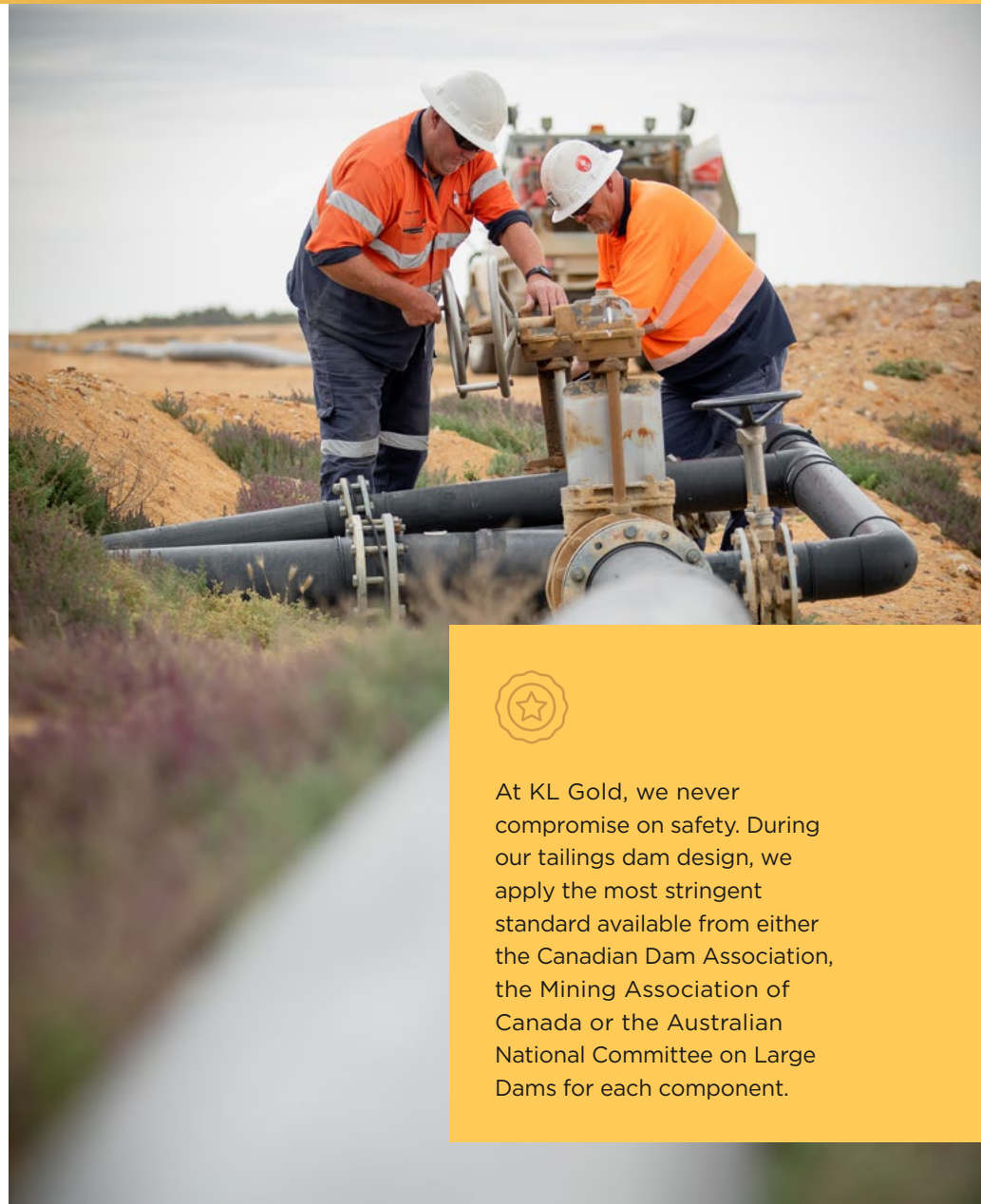
*International Council on Metals and the Environment.* Detour Lake Mine is certified under the ICMC, whereas KL Gold's other mines are compliant with ICMC standards of practice for cyanide transport, storage, use, and disposal.

### Other Material Management

In addition to mining and mineral processing wastes, such as tailings and waste rock, our operations generate non-mining waste through routine mine operations and domestic use of the workforce that requires proper end-of-life management. Hazardous wastes (such as used oils, batteries and reagents packaging) and non-hazardous waste (such as food waste, recyclables, and construction materials) are disposed of off-site by licensed waste management companies or landfilled in onsite facilities. All waste disposal and recycling programs are compliant with local regulations.

### Our Performance

KL Gold currently operates various active Tailings Storage Facilities and water dams. We have a dedicated Accountable Executive Officer who oversees all construction, operation, and maintenance of tailings facilities at the operational level.



At KL Gold, we never compromise on safety. During our tailings dam design, we apply the most stringent standard available from either the Canadian Dam Association, the Mining Association of Canada or the Australian National Committee on Large Dams for each component.

### Tailings and Waste Production in 2020

	GLOBAL	MACASSA MINE	DETOUR LAKE MINE	FOSTERVILLE MINE
Total Active Tailings Facilities (#)	8	5	1	2
Total Inactive Tailings Facilities (#)	4	2	2	0
Waste Rock Mined (Tonnes)	310,122,508	387,093	308,787,977	947,438
Tailings Produced (Tonnes)	24,025,600	298,283	23,149,596	577,721
Total Hazardous Waste Disposed Offsite (Tonnes)	3,080	60	2,954	67





### North Tailings Storage Facility (NTSF)

The North Tailings Storage Facility was brought online in 2020 and replaces the Macassa Mine Tailings Storage Facility, which has come to the end of its useful life, and is being brought to closure progressively. The NTSF is state of the art and boasts many design controls and safety features, including:

- A factor of safety that meets or exceeds the Canadian Dam Association guidelines
- A geotextile liner to minimize the potential for impacts to groundwater via seepage
- An engineered sump network, which will control any seepage that may occur and return the material back into the NTSF for storage
- Deep-soil mixing—a concrete pillar into the ground to further improve foundation conditions and reinforce the dam
- Tailings pipelines are inside lined ditches that contain any material in the event of a spill. These lined ditches are also equipped with their own sumps, which allows for precipitation to be removed as needed
- Instrumentation and controls, including vibrating wire piezometers and groundwater monitoring wells
- Tailings thickening to minimize water consumption and maximize efficient land use

## KL Gold Tailings Management System Overview

### PHASES



#### DESIGN & CONSTRUCTION

Tailings dams must be designed and constructed in a manner that meets or exceeds regulatory requirements and international best practices.



#### OPERATION

Tailings dams operational practices must meet or exceed regulatory requirements and ensure protection of health, safety, and environment.



#### CLOSURE

Tailings dams facilities must be designed and constructed with final closure in mind. Closure methodology must ensure long-term physical stability, chemical stability, and land use consistent with closure objectives.

### CONTROLS

- Compliance with most rigorous standards of the Canadian Dam Association (CDA), Mining Association of Canada (MAC) and the Australian National Committee on Large Dams (ANCOLD)
- Participation in international efforts, including Investor Mining & Tailings Safety Initiative, Global Independent Tailings Database, and Global Standard in Tailings Management
- Site characterization and design by Qualified Engineer-of-Record
- Oversight of construction and operation by Engineer-of-Record
- Daily, weekly, and monthly inspections by qualified site personnel
- Dam Safety Investigations annually
- Independent Dam Safety Reviews every five years
- Operation, Maintenance and Surveillance (OMS) Manuals reviewed and updated annually
- Closure Plans reviewed by local communities and filed with government
- Closure Plans and reclamation progress reviewed regularly
- Australian Operations: successful revegetation of final tailings surfaces (e.g. Northern Territories Operations)
- Canadian Operations: Tailings Revegetation & Plant Metal Uptake Study ongoing



# Environmental Compliance

**KL Gold recognizes that environmental excellence and performance go far beyond just compliance and that responsible and sustainable development includes environmental considerations across all aspects of our operations.**

## Our Approach

KL Gold complies with extensive permit obligations across multiple regulatory bodies at each of our operations. We ensure that all regulated requirements are documented, tracked, and responsibilities assigned for all tasks required to manage and maintain site compliance. We have adopted best practice international standards, including the ongoing implementation of World Gold Council's (WGC) Responsible Gold Mining Principles (RGMP) and the Mining Association of Canada's Towards Sustainable Mining (MAC-TSM) across our operations.

Every reasonable effort is made to avoid interaction with specific environmental features and aspects to reduce potential negative impacts. When impacts cannot be avoided, a risk management approach is utilized to quantify the potential impacts and inform management and mitigation

efforts. Relevant control measures are implemented, maintained and verified to ensure compliance and guide performance. Each operation has a dedicated environmental department that ensures environmental obligations are met, and that all potential impacts and incidents are managed according to the procedure.

## Our Performance

From a regulatory compliance perspective, the environmental performance across all our operations continued to be positive in 2020. There were no significant environmental breaches, nor were any penalties or fines received related to environmental performance during the year.



Environmental incidents are categorized and evaluated in terms of their consequence and probability. All environmental incidents are logged in our internal online database for record-keeping and trend analysis. KL Gold considers any externally reportable environmental incident as a significant incident, having transparency at the Board of Director level.





The overall number of environmental incidents occurring across KL Gold was 22 in 2020. The majority of environmental incidents were spills, and were classified as low significance.

In 2020, KL Gold focused on integrating the recently acquired Detour Lake Mine operations into our Integrated Management System and environmental performance framework. The integration included updating and streamlining specific

environmental management systems and processes while also incorporating additional capacity and expertise. In 2021, a focus will be the ongoing implementation of the World Gold Council's (WGC) Responsible Gold Mining Principles (RGMP) and the Mining Association of Canada's Towards Sustainable Mining (MAC-TSM) across our operations.

#### QUANTITY OF EXTERNALLY REPORTABLE INCIDENTS

Global

22

Macassa Mine

2

Detour Lake Mine

9

Fosterville Gold Mine

11



# Reclamation and Closure

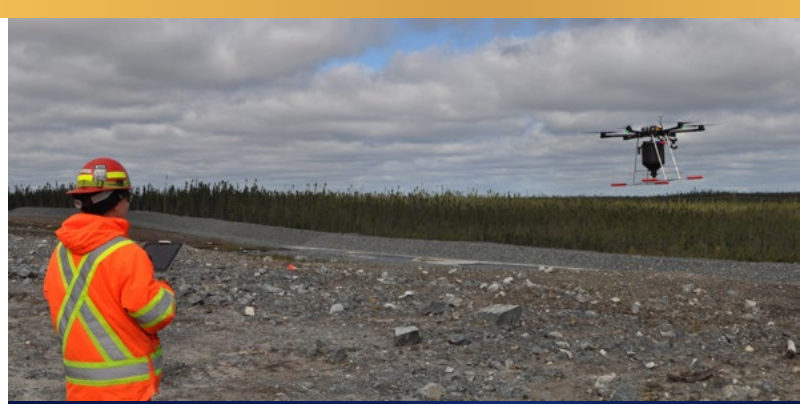
## Our Approach

Reclamation and mine closure planning processes are integral to our site planning and ongoing operations. The progressive reclamation and final closure planning process is initiated in the early phases of a project and undergoes continuous improvement throughout life-of-mine. We engage local communities, governments and other interested stakeholders often on these issues, and we seek to minimize impacts and maximize benefits whenever possible.



In 2020, Detour Lake Mine was honoured with the prestigious Tom Peters Memorial Mine Reclamation Award. This award is presented by the Canadian Land Reclamation Association in recognition of outstanding achievements in the practice of mine reclamation in Ontario.

KL Gold also contributes to industry best practices through its membership with the North American Mine Closure Working Group (NAMCWG).



## The Main Objectives and Processes for Closure Planning Include:



Ensuring no health and safety hazards are left behind



Restoring the landscape and its ecosystems to their original state to the maximum extent possible, with an emphasis on creating habitat for native species and facilitating traditional land use



Filing updated Closure Plans and providing Financial Assurance in compliance with regulatory requirements



Engaging with and fulfilling the expectations of stakeholders, including Indigenous communities and local land users



Validating closure concepts through detailed technical and research studies that improve understanding and increase the certainty of successful execution







### **Detour Lake Mine Reclamation Program**

Due to its long mine life (2040 or beyond), progressive reclamation at Detour Lake Mine will occur in parallel with ongoing operations. The Progressive Reclamation Program at Detour Lake Mine, as well as the eventual site closure, are supported by a long-term, multidisciplinary research program that was initiated in 2012. The extensive efforts of this program continue to address several aspects critical to successful mine reclamation, including ecosystem restoration with native species, innovative methodologies (such as seeding via drone), and the management of metal leaching and acid rock drainage from mine waste materials. The research program has not only led to the development and initiation of full-scale progressive reclamation at Detour Lake Mine, but also contributed knowledge to industry-wide mine reclamation practices in general.



### **Site Specific Progressive Rehabilitation Target**

Detour Lake Mine

# 10 ha

per year



# Mine Reclamation Framework

All sites have an objective to not require active treatment into post-closure.



## SETTING CLOSURE OBJECTIVES

Mapping pre- and post-mining ecosystems

Community consultation



## MONITORING

Ensure restoration and environmental goals are being met

Adaptive management when required



## CERTIFICATION

Reclamation certified by government

Returning the land to Indigenous communities and land users

## Programs



### FILED CLOSURE PLAN

#### Revegetation Research

In partnership with local universities, long-term revegetation studies are underway to evaluate and enhance the growth of native plant species on mine waste material, including waste rock and tailings. In addition to native species of trees, shrubs, and grasses, this aspect of the research program also aims to develop innovative methods for the propagation of lichen, a pioneering organism and important food source for Woodland Caribou.



### DETAILED DESIGN

#### Water Balance/ Water Quality

Site-specific water quality models are constructed to facilitate the planning of post-closure water management infrastructure and ensure that mine contact water quality is protective of aquatic life. This includes the long-term physical and geochemical behaviour of mine areas flooded at closure, when they will serve as facilities for the management of water quantity and quality.



### FACILITY CONSTRUCTION

#### Test Cover Program

The Test Cover Program evaluates different cover system options, including the creation of habitat and the performance of plant and root development. To evaluate options, experimental plots are designed with varying slope angles, soil thicknesses, and prescriptions for vegetation composition and position.



#### FILED CLOSURE PLAN

Reviewed and filed  
by regulators

Financial Assurance  
held in trust  
by government



#### DETAILED DESIGN

Life-of-Mine Plan with  
closure objectives in mind

Technical studies  
and research program  
to ensure success



#### RECLAMATION

Physical decommissioning,  
establishing closure-  
period infrastructure and  
restoration activities

Opportunities for training  
and business development



#### FACILITY CONSTRUCTION

Built in accordance to  
design-for-closure

Progressive Reclamation  
whenever completed areas  
are available



#### RECLAMATION

### End Land Use Plan

End Land Use Planning is guided by feedback from Indigenous communities and the objective of re-establishing pre-mine ecosystems to the extent possible. The End Land Use Plan provides the basis for closure objectives and informs the planning and implementation of progressive and final reclamation.



#### MONITORING

### Canadian Seed Bank

The Canadian Seed Bank Program involves the annual collection and preservation of seeds from native species of trees and shrubs local to KL Gold's mine sites in Northern Ontario. Such seeds are uniquely adapted to harsh regional conditions, and not commercially available in the quantity required for reclamation activities. Further, certain plant species only produce seeds every few years, necessitating advance planning for collection.

A well-managed seed bank is therefore critical to maintaining an adequate supply of plants for use in progressive reclamation and final closure. KL Gold's Ontario Seed Bank for native plants is entering its third year of collection. The bank now has a one- to three-year supply of seeds for over a dozen deciduous tree and shrub species that are local to the mine sites and have performed well in revegetation studies to date.



## Our Performance

For all of KL Gold's Operations, we have closure and reclamation plans with site-specific measures designed to minimize any long-term negative impacts, promote ecosystem re-establishment, protect the watersheds, and maximize social benefit where we operate. To support future anticipated closure and reclamation costs, each operating site has financial security obligations, which are estimated and accounted for per the requirements of the jurisdictions in which we operate and subject to review by an independent accounting firm.



Closure has been initiated at Holt-Holloway Mines, with completion planned over a three-year period. Closure activities include the removal of mine infrastructure, partial backfilling of waste rock into the open pits, and revegetation of waste rock and disturbed areas left at surface.

Detour Lake Mine has reached a stage of development where areas are becoming available for progressive reclamation. Twenty hectares of progressive reclamation have been completed on MRS1 (the northern waste rock dump), and progressive reclamation areas by year have been integrated into the overall life-of-mine plan as a priority activity.







### **Backfilling Success Leads to Bigger Project Cosmo Pit**

In 2020, the Cosmo Howley Project at our Northern Territories Operations (NTO) was suspended after a cumulative operation that lasted nearly 100 years. KL Gold acquired this operation in 2016 and during the operation of NTO, extensive progressive rehabilitation efforts were underway to better understand the magnitude of costs and effectiveness of rehabilitation measures moving forward. One such project was the backfill of one of the smaller northern pits. This project provided a good case study that epitomizes the work ahead as the main rehabilitation measures involved treating water, moving waste rock back into existing pits and establishing a vegetated cover. As a result, we have successfully reclaimed the location and used this project to develop an overall site closure strategy and cost. The overall site rehabilitation is underway and is projected to be completed within two years.







In 2020 at our Macassa Mine, we implemented a wildlife management program designed to educate employees about Black Bear behaviour and seasonal land use trends. Black Bears live throughout most of Ontario and can be found within the operation boundary during times of food scarcity, predominantly post-hibernation. The program is designed to protect both the workforce should an encounter occur and this keystone species.



## Biodiversity

**KL Gold's operations are located within regions with diverse ecosystems and habitats, all of which have unique and important biological, ecological and biodiversity values. KL Gold is committed to protecting biodiversity, including critical habitats and species at risk, and integrating biodiversity conservation throughout our activities and operations.**

### Our Approach

The lands, habitats, and ecosystems that we operate in are a complex and interconnected network of species. The nature of our activities can have impacts that extend beyond the immediate areas of our operations. Our biodiversity management planning aims to protect and preserve habitat and ecosystems, and potentially fragile or vulnerable species that call these critical habitats their home, while managing our activities and operations responsibly, well into closure and post-closure.

As part of this, we identify keystone and potentially vulnerable species to develop not only monitoring and research strategies to further understand how best to support their communities and ecosystems; but also, areas of focus for meaningful application of Traditional Knowledge. As we continually adapt our management strategies, we incorporate feedback from our stakeholders and Traditional Knowledge holders, and continually assess how biodiversity preservation has been considered in land use planning and management.







### Woodland Caribou

The West Detour Project is a planned expansion of the Detour Lake Mine. This requires development of mine infrastructure over an area located within the Kesagami Woodland Caribou Range, home to a protected caribou population. Although caribou are not observed as frequently or in high abundance within 10 km of the proposed area, KL Gold has committed to ensuring the West Detour Project provides double

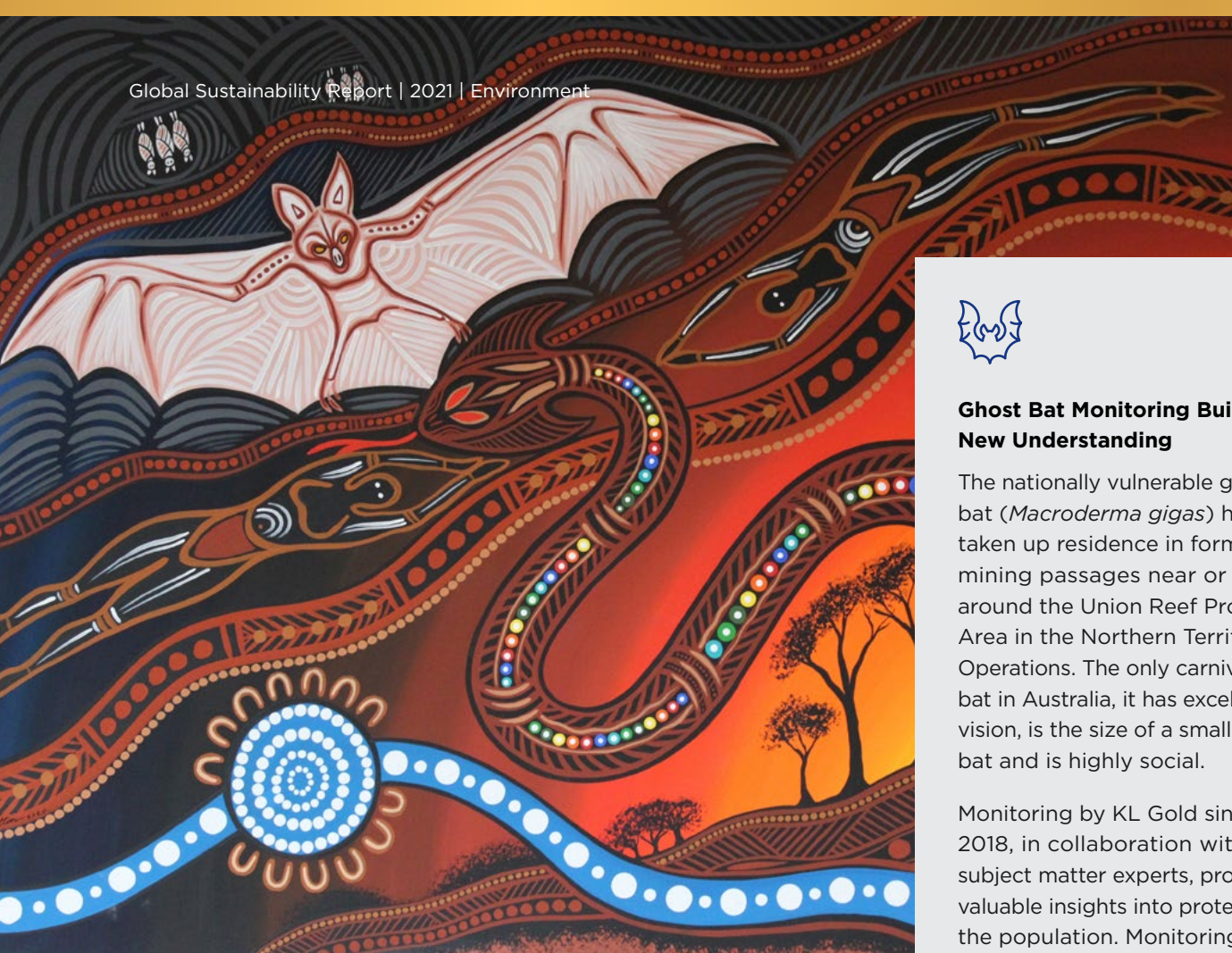
the area of caribou habitat at reclamation than was available at the site prior to development.

To build a robust restoration program, we have conducted winter aerial surveys since 2008 to understand caribou activity in the area. This includes a GPS collaring program since 2016 that provided caribou location information through satellite three times per day. With this information, we have developed

a restoration program that will create 20.72 km<sup>2</sup> area of caribou habitat, including conifer swamp, poor fen and disturbed meadow. Our proposed activities will span more than 50 km<sup>2</sup> to provide benefit across time (short and long-term habitat improvements). Our restoration program also includes post-closure programs that target lichen and landscape restoration in ways that are favourable for caribou habitat.







▲ The ghost bat is part of the local indigenous Dreamtime story

**Artist—Nathan Patterson:** Wagiman people  
[ilukadesigns.com.au](http://ilukadesigns.com.au)



### Ghost Bat Monitoring Builds New Understanding

The nationally vulnerable ghost bat (*Macroderma gigas*) has taken up residence in former mining passages near or around the Union Reef Project Area in the Northern Territory Operations. The only carnivorous bat in Australia, it has excellent vision, is the size of a small fruit bat and is highly social.

Monitoring by KL Gold since 2018, in collaboration with subject matter experts, provides valuable insights into protecting the population. Monitoring includes: 24-hour acoustic data; thermal imagery to measure numbers; and infrared footage that has captured social and feeding behaviours never seen in the wild. KL Gold is also committed to constructing artificial roosts in the future to support the population.

The International Union for Conservation of Nature (IUCN) Red List of Threatened Species™ is the world's most comprehensive information source on the extinction risk of animals, fungi and plants. Assessors place species into one of the IUCN Red List Categories, based on a series of assessment criteria. All our sites have been assessed for biodiversity. Globally, only two species near our properties have been identified in the Critically Endangered categories within the IUCN: swift parrot and regent honey eater. Both species have regional importance and are a part of routine biodiversity assessments.

### Biodiversity Assessment

OPERATING SITES	3
Sites assessed for biodiversity	100%
IUCN listed species near threatened	1
IUCN Listed species vulnerable	2
IUCN listed species critically endangered	2

*IUCN – International Union for Conservation of Nature*

# Air Quality and Noise

## Our Approach

Active management of air quality, noise and vibration is an essential part of how we operate our sites to protect the surrounding communities and environment. As part of our environmental management system, all our sites are equipped with devices to monitor dust, noise and vibration. We engage with our local communities regarding these issues and develop site-specific plans to reduce our impacts.

Our Macassa Mine and Fosterville Mine Operations are located in or near communities, so our efforts in reducing dust, noise and vibration generated from our sites are important to our local stakeholders. To ensure concerns are addressed, we incorporate noise criteria into our design and expansion activities, and we regularly monitor our activities to minimize impacts on employees and local residents. We are committed to keeping our local communities informed about the timing and extent of our activities they could perceive (such as blasting or controlled burns). In addition, we keep an active register of complaints from our local communities regarding air, noise and vibration and work with our communities to manage them.



### Noise Attenuation—Ventilation System Surface Fans

Construction of a new ventilation system was completed at the Fosterville Mine in 2020. The aim of the ventilation upgrade was to establish a system to adequately ventilate the main mining activity areas, providing workers with a cooler place of work and readier access to fresh air. To mitigate any potential noise impacts, noise modelling and noise attenuation engineering was undertaken during the project design stage to help inform what noise attenuation measures would be required to ensure noise levels at sensitive receptors would remain below acceptable levels. Independent noise testing during commissioning of the ventilation system demonstrated that enclosing the fans and incorporating silencers on the fan exhaust outlets achieved the desired results.





## Our Performance

All three of our operations have active dust management programs. Macassa Mine and Fosterville Mine, due to their locations, have continuous noise and air monitoring programs, respectively, to monitor performance. In 2020, there were eight noise exceedances at our operations and 21 air quality exceedances. However, 20 of 21 air quality exceedances occurred at Fosterville Mine in Q1 2020 during a period of abnormal local air quality due to bushfires and climate conditions. Through our commitment to our controls, and the periodic verification of these controls, we have seen a reduction in the number of exceedances since 2019.

No fines or penalties were assigned to any of our operations concerning these aspects.



## 2020 Noise and Air Quality Compliance

	MACASSA MINE	DETOUR LAKE MINE	FOSTERVILLE MINE
Noise Exceedance Events	0	0	8
Air Quality Non-Compliance Occurrence	1	0	20*
Active Dust Management	Yes	Yes	Yes
Continuous Noise Monitoring	Yes	No	No
Continuous Air Quality Monitoring	No	No	Yes

\* All exceedances occurred in Q1 2020 during a period of abnormal local air quality, including recorded dust storms across the region and unprecedented bushfires in eastern Victoria and NSW.

# Sustainability Ledger

## 2020 Performance Data

	TOTAL	MACASSA MINE	DETOUR LAKE MINE	FOSTERVILLE MINE
Mining method	Underground & open pit	Underground	Open pit	Underground
Processing method	Various	Carbon in pulp (CIP)	Gravity separation, concentrate leach, agitated tank leaching, carbon-in-pulp (CIP), solvent extraction and electrowinning, & cyanide (reagent)	BIOX, CIL, & gravity circuit
Ore processed (tonnes) <sup>1</sup>	21,998,039	312,758	21,091,938	593,343
Attributable gold production (ounces) <sup>1</sup>	1,340,262	183,038	516,757	640,467
Total attributable gold production (including KL North prior to suspension)	1,369,652			
<b>Safety (100% basis)</b>				
Lost-time injury frequency rate (per 200,000 hours worked) (employees + contractors)	0.3	0.3	0	1.1
Fatal injuries	0	0	0	0
Total reportable injury frequency rate (per 200,000 hours worked) (employees + contractors)	2.5	3.5	1.9	3.4
Medical treatment injuries (#) (per 200,000 hours worked) (employees + contractors)	2.2	3.1	1.9	2.3
Near miss frequency rate (employees + contractors)	9.7	4.8	10.7	8.1
Serious potential incident (SPI) (#)	78	32	27	17
Serious potential incident frequency rate (per 200,000 hours worked) (employees + contractors)	2.0	3.5	1.4	2.0
<b>Workforce (100% basis)</b>				
Employees (full-time equivalent)	2542	878	1067	597
Male (full-time equivalent)	2284	797	967	520
Female (full-time equivalent)	258	81	100	77
Male (% of workforce)	90%	91%	91%	87%



	TOTAL	MACASSA MINE	DETOUR LAKE MINE	FOSTERVILLE MINE
Female (% of workforce)	10%	9%	9%	13%
Male (% of management)	84%	84%	89%	78%
Female (% of management)	16%	16%	11%	22%
Females junior management (%)	17%	30%	6%	14%
Females in revenue generating positions (#)	124	24	46	54
Voluntary turnover (full-time equivalent) (#)	180	68	82	30
Involuntary turnover (full-time equivalent) (#)	180	87	82	11
Voluntary turnover (rate)	7%	8%	8%	6%
Involuntary turnover (rate)	7%	10%	8%	2%
New hires (full-time equivalent) (#)	456	138	186	132
Employees covered by collective bargaining agreements (%)	13%	0	0	60%
Total strikes and lockouts	0	0	0	0
Employee training (hrs)	82,314	5,465	27,703	49,146
Average hours of training per employee	38.2	6.2	26.0	82.3
Training and development investment (\$/employee)	\$2,160	\$238	\$1,839	\$4,406
Open positions filled internally (%)	19%	10 – 15% (est.)	15%	23%
Contractors (average onsite at any given time)	913	276	400	237
<b>Environmental (100% basis)</b>				
Number of regulatory actions	4	0	0	4
Fines (#)	0	0	0	0
Number of externally reportable spills	22	2	9	11
<b>Energy/Greenhouse Gas</b>				
Total energy consumption (Gigajoules)	3,869,223	633,739	2,765,279	470,205
Total electricity purchased (Gigajoules)	3,786,144	550,660	2,765,279	470,205
Direct energy consumption (Gigajoules)	0	0	0	0
Percentage grid electricity	100	100	100	100
Energy consumed per tonne of ore processed (Gigajoules/tonne)	0.16	2.03	0.12	0.79
Energy consumed per ounce of gold (Gigajoules/oz)	2.79	3.46	4.91	0.73
Greenhouse gas emissions (scope 1) (tonnes CO <sub>2</sub> e)	279,227	8,362	246,942	23,924
Greenhouse gas emissions (scope 2) (tonnes CO <sub>2</sub> e)	159,208	3,059	15,363	140,786
Total greenhouse gas emissions (scope 1 and 2) (tonnes CO <sub>2</sub> e) <sup>2</sup>	438,436	11,421	262,305	164,710
Greenhouse gas emissions (scope 1 and 2) per tonne of ore processed (t CO <sub>2</sub> e/tonne) <sup>2</sup>	0.02	0.04	0.01	0.28
Greenhouse gas emissions (Scope 1 and 2) per oz of attributable gold production (tCO <sub>2</sub> e/oz)	0.32	0.06	0.47	0.26

	TOTAL	MACASSA MINE	DETOUR LAKE MINE	FOSTERVILLE MINE
<b>Water Use</b>				
Total water withdrawn – groundwater (m <sup>3</sup> )	6,026,459	1,748,816	3,471,416	806,227
Total water withdrawn – surface water (m <sup>3</sup> )	1,084,762	552,125	532,637	0
Total water withdrawn – precipitation captured (m <sup>3</sup> )	4,977,572	910,520	4,067,052	0
Total water withdrawn – third-party sources (municipal water) (m <sup>3</sup> )	832,590	350,805	0	481,785
Total water withdrawn (m <sup>3</sup> )	12,921,383	3,562,266	8,071,106	1,288,012
Total water withdrawn from water-stressed areas (m <sup>3</sup> )	1,288,012	0	0	1,288,012
Total water discharged – groundwater (m <sup>3</sup> )	1,738,691	1,738,691	0	0
Total water discharged – surface water (m <sup>3</sup> )	1,905,583	1,213,877	974,606	0
Total water discharged (m <sup>3</sup> )	3,927,174	2,952,568	974,606	0
Total water consumed (m <sup>3</sup> )	8,994,209	609,698	7,096,500	1,288,012
Water recycled/reused (m <sup>3</sup> )	21,087,279	768,886	18,954,393	1,364,000
Total water used (consumed + recycled) (m <sup>3</sup> )	30,081,488	1,378,584	26,050,893	2,652,012
Recycled water (% of total water used) (m <sup>3</sup> )	70.1%	55.8%	72.8%	51.4%
Water intensity (water consumed per tonne of ore processed) (m <sup>3</sup> /tonne) <sup>2</sup>	0.38	1.95	0.31	2.17
Water intensity (water consumed per oz of attributable gold production) (m <sup>3</sup> /oz) <sup>2</sup>	6.49	3.33	12.60	2.01
<b>Significant Materials Use</b>				
Diesel and biodiesel fuel (m <sup>3</sup> )	97,184	1,898	87,984	7,302
Cyanide (tonnes as CN <sup>-</sup> )	9,890	415	9,155	319
Lime (tonnes)	16,316	1,259	14,512	545
Blasting agents (tonnes)	29,538	680	28,787	71
<b>Mineral Wastes</b>				
Waste rock mined (tonnes)	310,122,508	387,093	308,787,977	947,438
Tailings produced (tonnes)	24,025,600	298,283	23,149,596	577,721
Total active tailings facilities (#)	8	1	2	5
Total inactive tailings facilities (#)	4	2	0	2
Acid Rock Drainage predicted to occur and is actively mitigated and/or under treatment or remediation	-	No	Yes	No



	TOTAL	MACASSA MINE	DETOUR LAKE MINE	FOSTERVILLE MINE
<b>Non-Mineral Wastes</b>				
Hazardous waste disposed on site (tonnes) <sup>1</sup>	0	0	0	0
Hazardous waste disposed off site (tonnes) <sup>1</sup>	1,353	60	1,227	67
Hazardous waste incinerated on site and off site (tonnes)	0	0	0	0
Hazardous waste recycled on site and off site (tonnes)	1,726	0	1,726	0
Total hazardous waste (tonnes)	3,080	60	2,954	67
Non-hazardous waste disposed on site (tonnes)	34,425	0	34,425	0
Non-hazardous waste disposed off site (tonnes)	3,495	2,853	0	642
Non-hazardous waste incinerated on site and off site (tonnes)	0	0	0	0
Non-hazardous waste recycled on site and off site (tonnes)	5,118	422	4,180	517
Total non-hazardous waste (tonnes)	43,039	3,275	38,605	1,159
Total recycled wastes (tonnes)	6,845	422	5,906	517
<b>Land Status (100% basis)</b>				
Total land disturbed and not yet reclaimed at beginning of reporting year (ha)	4,210	519	3,388	303
Land newly disturbed during reporting period (ha)	56	0.3	56	0
Land reclaimed during reporting year (ha)	10	0	10	0
Total land disturbed and not yet reclaimed at end of reporting year (ha)	4,256	519.3	3,434	303
Operations assessed for biodiversity (%)	100	100	100	100
Site-specific biodiversity management plan(s)	Yes	Yes	Yes	Yes
Percentage of Reserves in or near areas in or near sites with protected conservation status or endangered species habitat	88%	0%	100%	100%
Percentage of (1) proved and (2) probable reserves in or near areas of conflict	0%	0%	0%	0%
<b>Supply Chain<sup>3</sup></b>				
Ontario & Victoria supply chain spend (\$M USD)	905.2	187.4	499.0	103.1
National supply chain spend (\$M USD)	257.0	14.8	149.9	56.5
International supply chain spend (\$M USD)	26.2	6.1	15.8	0.6
Total supply chain spend (\$M USD)	1,188.5	208.3	664.7	160.2
<b>Human Rights</b>				
Complaints and incident investigations related to Human Rights (#)	0	0	0	0

	GLOBAL	CANADA	AUSTRALIA
<b>Corporate Affairs (by Country basis)</b>			
Employees who completed annual code of conduct and policy refresher (%)	95%	94%	97%
Total wages (USD)	\$306,332,000	\$238,552,000	\$67,780,000
Taxes paid (USD)	\$329,300,000	\$48,800,000	\$281,400,000
Royalties (USD)	\$30,598,000	\$0	\$30,598,000
Fees (USD)	\$4,264,000	\$4,264,000	\$0
<b>Community Donations (by Country basis)</b>			
Community donations (recreational) (USD)	\$219,000	\$80,000	\$139,000
Community donations (health) (USD)	\$621,000	\$410,000	\$211,000
Community donations (education/training) (USD)	\$87,000	\$62,000	\$25,000
Community donations (social) (USD)	\$1,506,000	\$54,000	\$1,452,000
Community donations (COVID-19) (USD)	\$1,067,000	\$639,000	\$1,012,000
Total community donations (USD)	\$3,500,000	\$1,245,000	\$1,618,000

Some figures and percentages may not add up to the total figure or 100 percent due to rounding.

*Intensity-based denominators: To ensure comparability with reporting boundaries, intensity-based denominators (gold equivalent ounces and other production-based figures) have been reviewed to ensure that only production data for sites included in our sustainability reporting boundaries are also included in our sustainability-related intensity-based denominators. For this reason, some figures may vary from production figures produced in KL Gold's annual financial or production disclosures.*

Detour Lake Mine data based on full year January 1 to December 31, 2020 unless otherwise indicated.

<sup>1</sup> The Detour Lake Mine was acquired on January 31, 2020. FY 2020 data in this section represents output from that date to December 31, 2020.

<sup>2</sup> As classified by the World Resources Institute's (WRI) Water Risk Atlas tool, Aqueduct.

<sup>3</sup> In addition to goods and services procured at Macassa Mine, Detour Mine and Fosterville Mine, total supply chain spend includes an additional \$155.2 million spend for goods and services at our non operating sites at the Holt Complex and NT, and corporate spend. Of the total \$155.2 million, \$115.7 million represented spend in Ontario & Victoria and \$35.9 million represented spent at the national level.



## Sustainability Accounting Standards Board (SASB) Index

SASB REFERENCE	METRIC	PAGE
<b>GHG Gas Emissions</b>		
EM-MM-110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	50
EM-MM-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	48
<b>Air Quality</b>		
EM-MM-120a.1	Air emissions of the following pollutants: (1) CO, (2) NO <sub>x</sub> (excluding N <sub>2</sub> O), (3) SO <sub>x</sub> , (4) particulate matter (PM10), (5) mercury (Hg), (6) lead (Pb), and (7) volatile organic compounds (VOCs)*	Not provided
<b>Energy Management</b>		
EM-MM-130a.1	(1) Total energy consumed, (2) percentage grid electricity, (3) percentage renewable, (4) total self-generated energy	76
<b>Water Management</b>		
EM-MM-140a.1	(1) Total water withdrawn, (2) total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	76
EM-MM-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	76
<b>Hazardous Waste Management</b>		
EM-MM-150a.1	Total weight of tailings waste, percentage recycled	77
EM-MM-150a.2	Total weight of mineral processing waste, percentage recycled	77
EM-MM-150a.3	Number of tailings impoundments, broken down by MSHA hazard potential	58
<b>Biodiversity Impact</b>		
EM-MM-160a.1	Description of environmental management policies and practices for active sites	21
EM-MM-160a.2	Percentage of mine sites where acid rock drainage is: (1) predicted to occur, (2) actively mitigated, and (3) under treatment or remediation	58
EM-MM-160a.3	Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	72
<b>Security, Human Rights &amp; Rights of Indigenous Peoples</b>		
EM-MM-210a.1	Percentage of (1) proved and (2) probable reserves in or near areas of conflict	78
EM-MM-210a.2	Percentage of (1) proved and (2) probable reserves in or near Indigenous land	Not provided
EM-MM-210a.3	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	38

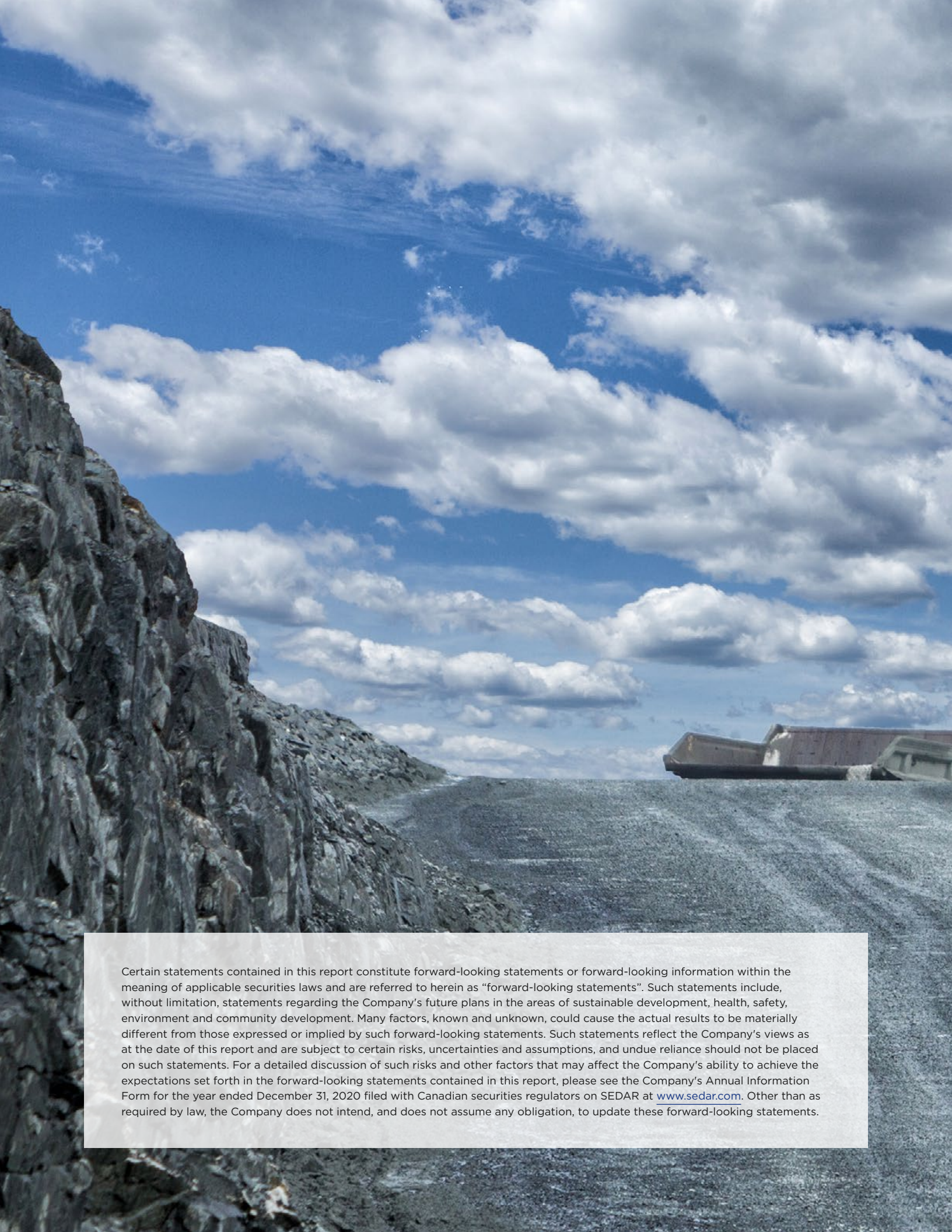
SASB REFERENCE	METRIC	PAGE
<b>Community Relations</b>		
EM-MM-210b.1	Discussion of engagement processes to manage risks and opportunities associated with community interests	38
EM-MM-210b.2	Number and duration of non-technical delays	75
<b>Labor Relations</b>		
EM-MM-310a.1	Percentage of active workforce covered under collective bargaining agreements, broken down by US and foreign employees	75
EM-MM-310a.2	Number and duration of strikes and lockouts	75
<b>Workforce Health &amp; Safety</b>		
EM-MM-320a.1	(1) MSHA all-incidence rate, (2) fatality rate, (3) near miss frequency rate (NMFR) and (4) average hours of health, safety, and emergency response training for (a) full-time employees and (b) contract employees*	75
<b>Business Ethics &amp; Transparency</b>		
EM-MM-510a.1	Description of the management system for prevention of corruption and bribery throughout the value chain	17
EM-MM-510a.2	Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	4

*Partially meets the disclosures suggested by the SASB Standards.*

## Task Force on Climate-related Financial Disclosures (TCFD) Index

CATEGORY	DISCLOSURE	PAGE
Governance (a)	Board oversight	21
Governance (b)	Management's role	21
Strategy (a)	Risk and opportunity identification	48
Strategy (b)	Impact of risks and opportunities	51
Strategy (c)	Resilience scenarios	In development
Risk Management (a)	Risk identification process	In development
Risk Management (b)	Risk management process	In development
Risk Management (c)	Risk integration	In development
Metrics and Targets (a)	Metrics used to measure risks/opportunities	In development
Metrics and Targets (b)	GHG emissions (Scope 1-3)	76
Metrics and Targets (c)	Targets and performance	In development





Certain statements contained in this report constitute forward-looking statements or forward-looking information within the meaning of applicable securities laws and are referred to herein as “forward-looking statements”. Such statements include, without limitation, statements regarding the Company’s future plans in the areas of sustainable development, health, safety, environment and community development. Many factors, known and unknown, could cause the actual results to be materially different from those expressed or implied by such forward-looking statements. Such statements reflect the Company’s views as at the date of this report and are subject to certain risks, uncertainties and assumptions, and undue reliance should not be placed on such statements. For a detailed discussion of such risks and other factors that may affect the Company’s ability to achieve the expectations set forth in the forward-looking statements contained in this report, please see the Company’s Annual Information Form for the year ended December 31, 2020 filed with Canadian securities regulators on SEDAR at [www.sedar.com](http://www.sedar.com). Other than as required by law, the Company does not intend, and does not assume any obligation, to update these forward-looking statements.







**GOING FOR  
GOLD IN  
EVERYTHING  
WE DO**