

LUCARA  
DIAMOND



**2018**  
**SUSTAINABILITY REPORT**  
MAKING DIAMOND HISTORY



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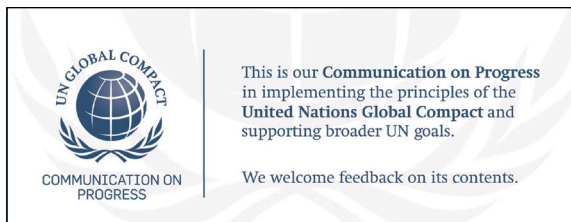
Cover page images (counter clockwise): Tending to farmed vegetables at Mokubilo community farming project (top); Grade control geologists discussing ore loading, Karowe Mine (middle); Community event near the Karowe Mine (bottom); 240 carat diamond recovered in Q1/19, Karowe Mine  
Left: Karowe open pit mine



XRT (X-ray transmission) circuit buildings and processing plant

## ABOUT THIS REPORT

This is our seventh consecutive annual sustainability report. It is prepared in accordance with the GRI Standards: Core option, and selected G4 Mining and Metals Sector Disclosures. The report covers (1) Lucara Diamond Corp. (2) Lucara Botswana (Pty) Ltd. and (3) Clara Diamond Solutions Corporation. The data presented covers the calendar year 2018. This report has been subject to moderate assurance in accordance with AA1000 Assurance Standard (2008). This report also comprises our Communication of Progress to the UN Global Compact. The GRI Standard and UN Global Compact Indices are accessible at [www.lucaradiamond.com/sustainability](http://www.lucaradiamond.com/sustainability). For feedback or questions on this report, please email [csr@lucaradiamond.com](mailto:csr@lucaradiamond.com).



## CORPORATE PROFILE

Lucara Diamond Corp. (Lucara) is a Canadian diamond mining company headquartered in Vancouver. Lucara is a member of the Lundin Group of Companies and is listed on the Toronto Stock Exchange (TSX), Nasdaq Stockholm and the Botswana Stock Exchange under the symbol "LUC". Lucara complies with the Kimberley Process, is certified under the Responsible Jewellery Council Code of Practices, and is a signatory to the UN Global Compact.

The Karowe Diamond Mine (Karowe) is operated by Lucara's wholly-owned subsidiary Lucara Botswana (Pty) Limited (Lucara Botswana). Karowe is one of the world's foremost producers of large, high quality diamonds in excess of 10.8 carats, including the historic 1,109 carat Lesedi La Rona and the 813 carat Constellation. The mine has been in production since 2012. Lucara embarked on a US\$29 million technical program in 2018 to support a Feasibility Level study for a potential underground operation at Karowe, with the aim of extending mine-life from 2026 to at least 2036.

Clara Diamond Solutions (Clara), a subsidiary of Lucara, is a secure, digital sales platform that uses proprietary analytics together with cloud and blockchain technologies to modernize the existing diamond supply chain, driving efficiencies, unlocking value and ensuring diamond provenance from mine to finger.

# UN SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs), defined by the United Nations in September 2015, represent the world’s agenda for equitable, socially inclusive and environmentally sustainable economic development ([www.un.org/sustainabledevelopment](http://www.un.org/sustainabledevelopment)).

The United Nations has identified a total of 17 SDGs covering a wide range of sustainability issues. The mining industry, including Lucara, has a major opportunity to mobilize significant human, physical, technological and financial resources to advance the SDGs in partnership with other actors.

Lucara supports the Sustainable Development Goals. Throughout this report, we identify SDGs that our activities link or contribute to. The SDGs we consider most relevant to our current and future activities are identified below.





472 carat "Serowe" diamond recovered in April 2018

**LUCARA DIAMOND CORP**



## OUR MISSION

**Using innovation, creating value, and making a difference across the diamond industry.**

Lucara believes that sustainability is a long-term commitment that requires focus and discipline to help drive continuous improvements in all areas of our business. We also believe it is fundamental to our success as an organization and in delivering broad based, lasting economic and social benefits to all our stakeholders and the communities in which we live and work.

## OUR VALUES

**Respect:** We respect and listen to our people, our communities and our local governments.

**Health & Safety:** What we do at work, we do at home.

**Transparency & Trust:** Communicating with openness and honesty.

**Collaboration:** Creating positive economic and social benefits; partnering with our communities.

**Integrity:** Delivering on our promises and commitments.

**Entrepreneurial Spirit and Trail Blazing:** We empower our people to share ideas that improve our workplaces and our company.

## OUR PRIORITIES

**Our People:** Mining exceptional stones, fostering exceptional talent

**Safe & healthy workforce and communities:** Cultivating a culture of safety wherever we work and live

**Sustainable development through partnership and collaboration:** Achieving more by working together

**Delivering long-term and sustainable value for our shareholders and stakeholders**

**Pursuing opportunities to grow our business**

**Contribute to the Lundin Group's history of success and excellence**



## MESSAGE FROM THE PRESIDENT AND CEO

I am pleased to present Lucara's seventh annual sustainability report to our stakeholders. It highlights how innovation, award-winning health and safety performance, operational excellence, and our social licence enabled us to achieve five important outcomes in 2018.

**Strong Performance** – Supported by our state-of-the-art processing, we recovered a record 829 Specials (single diamonds in excess of 10.8 carats), which drive our revenues, from the Karowe mine in Botswana. I thank our committed workforce, including 98 percent Botswana nationals, for achieving this performance with zero lost-time injuries.

**Product Stewardship** – We maintained the trust of our customers concerned about provenance and responsible mining of diamonds by operating in Botswana, complying with the Kimberly Process and achieving re-certification under the Responsible Jewellery Council Code of Practices. These efforts contribute to Lucara's ability to achieve average price per carat exceeding most of its peers.

**Social Licence** – Through our community engagement and investments, such as the Mokubilo farm, we demonstrate respect and support local development priorities. We also joined the UN Global Compact and are committed to implementing, disclosing and promoting its principles of human rights, labour, anti-corruption and environmental responsibility. This report serves as our Communication of Progress.

**Positioning for Growth** – We completed the first sale on Clara, our secure, digital sales platform, achieving a premium margin over traditional sales tenders. We invested US\$1.8 million in the continued development of Clara. As Karowe's orebody increases in grade and value with depth, we also spent US\$21.0 million to progress the feasibility study for a potential underground operation.

**Sustainability Opportunities** – Our staff and community workshops, and other reviews identified opportunities to better capture local procurement data, further review our energy efficiency, rebrand and strengthen our sustainability department, and continue to expand and align our community investment portfolio with the UN Sustainable Development Goals.
















**Looking Ahead** – As part of our Environment, Social and Governance commitments, the Karowe Diamond Mine Environment and Community Relations Department will transition to an expanded Sustainability Department during 2019. The Sustainability Department will work closely with all departments to develop objectives and set targets related to climate action, biodiversity, and progressive reclamation. The Sustainability Department will also assume the roles and responsibilities currently supported by the Lundin Foundation. The Lundin Foundation will continue to play an advisory role. 2018 was an exciting year of growth for Lucara and Lucara Botswana, we look forward to carrying that momentum through 2019.

Eira Thomas, President and CEO Lucara Diamond Corp.

## 2018 PERFORMANCE

## 2019 TARGETS

## LINKAGE

ECONOMIC PERFORMANCE		
Diamond sales achieved of 350,798 carats against a target of 270,000 to 290,000 carats. Women-led executive teams: 75% Lucara; 50% Lucara Botswana	300,000 to 320,000 carats of diamonds sold US\$ 170-200 million revenue Pursue joining SDG5 related events and activities	 
PRODUCT STEWARDSHIP		
Certified by Responsible Jewellery Council, compliant with Kimberley Process, and member of Diamond Producers Association	Continue to demonstrate full compliance and grow diamond sales through the Clara platform ensuring diamond provenance	 
PROCUREMENT IN BOTSWANA		
US\$ 137 million (2017: US\$ 114 million)	Commence an analysis of our potential to increase local procurement with a view to developing targets	 
COMMUNITY DEVELOPMENT		
Limited micro-loan repayments required redirection to capacity building, and start-up of community-owned projects	Strengthen sustainability team and expertise Continue to monitor and support existing projects, like Mokubilo Farm, and to identify others	   
HEALTH AND SAFETY		
Award-winning performance; Zero LTI	Zero LTI, achieve OHSAS 18001 scoring of 80% and transition to ISO 45001	 
PARTNERSHIPS		
Joined UN Global Compact; Support UN SDGs	Identify and expand collaboration on specific SDGs	 
ENVIRONMENTAL STEWARDSHIP		
Water recycling: 22%; Zero incidents; Updated Environmental Management Plan	Review energy efficiency, explore collaboration on water in Letlhakane, Transition Environment and Community Relations to Sustainability Department, including new positions, Plan to develop test plots for land reclamation	

LTI – Lost Time Injury; UN SDG – United Nations Sustainable Development Goals; SHECR - Safety, Health, Environment and Community Relations



## GOVERNANCE & ETHICAL CONDUCT

We continue to build a leading and responsible African-focused diamond production and development company. We have adopted and apply solid international corporate governance principles aligned with our values, and the requirements of publicly listed mining companies. In February 2018, we became a Participant of the United Nations Global Compact to demonstrate our commitment to implement, disclose and promote its principles of human rights, labour, anti-corruption and environmental responsibility.

To ensure understanding of and compliance with our Code of Conduct, our already experienced business leaders and senior managers, employees and main contractors are required to undertake appropriate training. Senior management also undertakes training on other relevant standards and compliance programs, for example, on requirements under the Extractive Sector Transparency Measures Act.



We disclose our payments to the government of Botswana, comply with the Kimberley Process and Canada's Extractive Sector Transparency Measures Act (ESTMA). We are certified under the Responsible Jewellery Council Code of Practices and signatory to the UN Global Compact promoting universal principles on human rights, labour, environment and anti-corruption. Our commitment to ethical business practices contributes to promoting the highest ethical standards for Botswana.

## Board of Directors

Lucara's Board of Directors is primarily responsible for supervising the management of our business and affairs. Its authority is determined by the provisions of the British Columbia Business Corporations Act and by Lucara's Articles. The Board meets regularly to conduct its business, which includes the approval of the quarterly and annual audited consolidated financial statements. The Board has established position descriptions for the CEO, Chair of the Board, Lead Director and Committee Chairs.

The Board regularly reviews its guidelines and policies and, not less than annually, considers how its corporate governance practices align with guidelines established by the Canadian regulatory authorities, and the Toronto Stock Exchange. Lucara is also guided by the rules and regulations of the NASDAQ OMX (Stockholm) Exchange.

The Board has established the committees listed on the following pages and recognizes delegation to committees does not discharge the Board's responsibility for its fiduciary duties.



## Board Member Diversity

The Board applies a Gender Diversity Policy which recognizes the importance of women having a greater representation at key decision-making points in organizations, particularly with regard to representation at the Board level and in Executive Officer positions. This information is tracked and discussed at Board level.

For 2018, women comprised 3 out of 7 of Lucara's Board members and 75 percent of Lucara's executive team, including the President and CEO, Chief Financial Officer (CFO) and Vice President of Corporate Development and Strategy. At Lucara Botswana, both the Managing Director and the CFO (50 percent of the executive team) are women.



5 GENDER EQUALITY

While the proportion of women in the mining sector continues to be generally low, we promote and apply an equal opportunities approach regarding gender. We provide conditions for employment of women on equal terms to men. Of our direct employees, 29 percent are women, and for all workers (including contractors), the proportion of women has increased from 13 percent to 16 percent in the past year. We also promote the inclusion of women at the top of our business, with women leading, for example, as President & CEO of Lucara Diamond Corp. and as Managing Director of Lucara Botswana.

Accounting staff at Lucara Botswana Office, Gaborone

## Board Committees

The **Audit Committee**, comprised of three independent and financially literate Board members, reviews and reports to the Board on the integrity of the consolidated company financial statements, and has oversight responsibility for internal controls, accounting and auditing activities.

The **Corporate Governance and Nominating Committee**, comprised of three independent Board members, assists the Board in identifying qualified individuals for Board membership, develops and implements corporate governance guidelines, and reports annually to Lucara's shareholders on corporate governance.

The **Safety, Health, Environment and Community Relations Committee**, comprised of three Board members (a majority of whom are independent), assists the Board in oversight of health, safety, environment, and community risks and compliance with related legal and regulatory requirements.

The **Compensation Committee**, comprised of three independent Board members, is responsible for administering the corporation's executive compensation program and overseeing incentive plans.



Scoop for diamond sorting and grading

## Corporate Responsibility

Our vision of corporate responsibility is founded upon a set of principles which guide our relationships with shareholders, employees, contractors, consultants, suppliers, partners, all levels of governments, and the communities affected by our operations.

Corporate responsibility is central to our strategic and operational thinking. We cannot sustain good financial and operational performance without simultaneously achieving our objectives in health and safety, environmental stewardship, human resource development, and community investment.

Lucara's contributions to the development of our host community goes beyond creation of jobs. We also enable and support entrepreneurs, and invest in important community infrastructure in collaboration with the Lundin Foundation and other development partners.

Lucara's Corporate Responsibility Charter can be accessed at [www.lucaradiamond.com](http://www.lucaradiamond.com).



Sorting diamonds at Lucara Botswana's facility, Diamond Technology Park, Gaborone

## Our Code of Business Conduct & Ethics

Our Code of Business Conduct and Ethics (see box right) sets out guiding principles for responsible and ethical behaviour that Lucara and its subsidiaries expect from their directors, officers, employees and contractors. The Code covers sixteen subject areas including compliance, business and financial transactions, human rights & harassment, conflicts of interest, confidentiality, fair competition, financial reporting and the whistleblower policy. Ultimate responsibility for human rights rests with our board.

We also require our contractors and suppliers to comply with the principles of the Code. Contractors must conduct their business affairs with honesty and integrity, and with a respect for the fundamental human rights and dignity of individuals. Contractors must operate in full compliance with all laws, rules and regulations applicable to the countries in which they operate, including anti-bribery laws, insider trading laws, competition laws, prohibition of forced labour and child labour laws.

## OUR CODE OF BUSINESS CONDUCT & ETHICS IS DESIGNED TO DETER WRONGDOING AND TO PROMOTE

Honest and ethical conduct

Respect for human rights and a harassment free workplace

Avoidance of conflicts of interest

Maintenance of confidentiality of Company information  
and protection of its assets and resources

Full, fair, accurate, timely and clear disclosure of reports  
and documents submitted to regulatory authorities and  
for external communications

Compliance with all applicable governmental laws,  
rules and regulations including insider trading,  
competition and anti-bribery laws

Prompt internal reporting of violations of this Code

Accountability for adherence to this Code

The full code is available on Corporate Governance section of Lucara's website:  
<https://www.lucaradiamond.com>

## Joining Global Compact

Lucara Diamond Corp. became a Participant of the UN Global Compact in February 2018 confirming our support for the Ten Principles of the Global Compact on human rights, labour, environment and anti-corruption. Our 2018 sustainability reporting serves as our Communication of Progress.



## ADOPTING GOOD INTERNATIONAL PRACTICE

We are supportive of global initiatives that address a wide range of corporate responsibility related issues. These include:

- The OECD Guidelines on Multinational Enterprises
- United Nations Guiding Principles on Business and Human Rights
- The Global Reporting Initiative
- The Voluntary Principles on Security and Human Rights
- The IFC Performance Standards on Social and Environmental Sustainability
- United Nations Global Compact
- The Responsible Jewellery Council Code of Practices
- The Kimberley Process Certification Scheme
- The Diamond Producers Association commitments on sustainability and compliance

## Environmental Policy

Lucara is committed to sustainable development and continuous improvement. Our commitments are set out in our Environmental Policy as summarized below.

### Key aspects of our Environmental Policy

- Conduct all activities in compliance with our Environmental Management Plan, applicable legislation and other requirements;
- Apply good international industry practices in the absence of legislation, such as those described in the International Finance Corporation's Performance Standards and the Equator Principles;
- Integrate the management of environmental, social, cultural and economic issues into company business practices and planning;
- Wise use of resources, prevention of environmental impacts, including pollution prevention;
- Implement, maintain and improve environmental management systems;
- Communicate openly with government authorities, employees, local communities and the public on our environmental commitments and performance.



Preparing to evaluate a special diamond

## Product Stewardship

Our customer base includes large, vertically integrated jewellery houses, both small and global manufacturers, and their increasingly discerning customers. They – and others involved in the diamond industry – view provenance (place of origin) and use of responsible mining practices to be important value drivers.

Our compliance with the Kimberley Process, membership of the Diamond Producers Association, and March 2018 re-certification under the Responsible Jewellery Council Code of Practices assures our customers and other stakeholders that we apply responsible ethical, human rights, social, and environmental practices in our operations. In addition, we joined the UN Global Compact in 2018 and support its principles on human rights, labour, environment and anti-corruption.

## DEMONSTRATING PRODUCT STEWARDSHIP

### Kimberley Process Certification Scheme (KPCS)

Our compliance with the Kimberley Process assures our customers of the provenance – or place of origin - of our diamonds from a 'conflict free' region. The Kimberley Process is an international certification program and imposes extensive requirements on its members (governments and companies) designed to remove 'conflict diamonds' – defined as rough diamonds used to finance wars against governments - from the global supply chain.

### Responsible Jewellery Council (RJC)

In March 2018, third-party auditors re-certified our operations under the RJC Code of Practices which provides assurance to our customers that we apply this whole-of-supply chain standard which addresses human rights, labour rights, environmental impact, mining practices, product disclosure and many more important topics in the jewellery supply chain.

### Diamond Producers Association (DPA)

Lucara is a founding member of DPA. It represents 75 percent of the world's diamond production and promotes the integrity and reputation of diamonds and the diamond industry. DPA's research publication available at [www.Total-Clarity.com](http://www.Total-Clarity.com) shows that its membership employed 77,000 people worldwide, salaries and wages created US\$3.9 billion in direct and indirect benefits, infused US\$6.8 billion in benefits into local communities through the purchase of local goods and services, and its environmental footprint included 160 kg of CO<sub>2</sub> equivalent per polished carat. According to an independent report by Trucost (2019), the estimated CO<sub>2</sub> equivalent associated with energy use in laboratory-created diamond production is nearly three times greater than diamonds produced by DPA members.



### **Payment Transparency**

We disclose our payments to governments in compliance with Canada's Extractive Sector Transparency Measures Act (ESTMA) and the EU Transparency and Accounting Directive. Lucara's ESTMA reporting can be accessed on our website: [www.lucaradiamond.com](http://www.lucaradiamond.com).

### **Whistleblower Policy**

Our Whistleblower Policy allows anyone, including employees of Lucara or its subsidiaries, to submit any concerns in confidence or anonymously regarding accounting, internal accounting controls, auditing matters or other activities by its employees, officers and directors. All reports, including an independently monitored "tip-off" line in Botswana, are assessed by the Audit Committee, which recommends corrective and/or disciplinary actions to the Board, if appropriate. In 2018, there were no confirmed incidents of corruption by employees of Lucara or its subsidiaries.

Diamonds prepared for sale, displaying the diversity of colour and shapes

## ECONOMIC PERFORMANCE

Lucara's Karowe Mine in Botswana successfully completed its sixth full year of operations in 2018 continuing to recover high value diamonds.

2018 was a record year for the recovery of Specials, defined as single diamonds in excess of 10.8 carats, with 829 stones (521 in 2017) totaling 24,793 carats recovered. This included 33 diamonds in excess of 100 carats (17 in 2017), of which five diamonds were in excess of 300 carats.

During the year, Lucara had sales totalling 350,798 carats for gross proceeds of US\$176.2 million at an average price of US\$502 per carat. The average sales price per carat in 2018 was impacted by a higher recovery of finer diamonds, although recovery of Specials was at a record level. Lucara has also set aside certain size and quality splits to build rough diamond inventory for sale through Clara.

The Company recorded EBITDA for the year of US\$60.5 million (US\$113.5 million in 2017) and an operating margin of 57 percent (72 percent in 2017), representing an operating margin per carat sold in 2018 of US\$286<sup>1</sup>.

Operating expenses increased about 22 percent, which is a reflection of the higher cost per tonne mined and one-time costs related to the mining contractor transition. The average operating margin in 2017 was positively affected by the sale of the 1,109 carat Lesedi La Rona diamond. Excluding the Lesedi La Rona, a comparable operating margin of 63 percent was achieved in 2017.

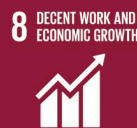
<sup>1</sup> Operating margin per carat sold is a non-IFRS measure.



Aerial view of Karowe open pit, with prolific South Lobe to the left (late 2015)

Lucara's year-end net cash balance was US\$24.4 million (US\$61.1 million in 2017).

Lucara Botswana paid US\$17.6 million in royalties and just over US\$5.0 million in taxes to the Government of Botswana in 2018.



8 DECENT WORK AND ECONOMIC GROWTH

With Botswana nationals representing 98 percent of our total workforce, including a majority of our senior management positions, we provide high quality jobs to Botswana nationals. During 2018, our mine employed 792 workers as direct employees and main contractors, excluding short-term contract projects. In addition, our local procurement and spending by our workers contributes indirectly to local employment and economic development.



<b>ECONOMIC PERFORMANCE (US\$ million)</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
<b>Direct Economic Value Generated</b>			
Revenues	295.5	220.8	176.2
<b>Economic Value Distributed (see supplemental info below)</b>			
Operating costs for ore processed	69.2	80.7	107.6
Capital procurement	25.3	35.4	37.7
Exploration expenditures	4.1	4.8	3.4
Sales, marketing, administrative and finance costs <sup>1</sup>	19.5	18.8	19.7
Donations, including community investments (Karowe) <sup>2</sup>	0.4	0.5	0.4
<b>Royalties and taxes to government</b>			
Payments to Government (Royalty)	29.5	22.1	17.6
Payments to Government (Corporate Tax) <sup>3</sup>	85.6	14.8	5.9
<b>Economic Value Retained/(Distributed)</b>	<b>61.9</b>	<b>43.7</b>	<b>(16.1)</b>

<sup>1</sup> Sales, marketing, administrative and finance costs exclude share-based compensation expense and depreciation (both non-cash items)

<sup>2</sup> Direct community investments (in millions of US Dollars) for the three-year period reported above totaled: \$0.06 (2016), \$0.09 (2017) and \$0.11 (2018). In addition to these direct investments, Lucara has partnered with the Lundin Foundation to create shared value, build resilient communities and deliver key initiatives within the communities near to where we operate and where our employees live. Payments to the Lundin Foundation for the three-year period reported above totaled: \$0.38 (2016), \$0.49 (2017) and \$0.48 (2018) of which \$0.14 was advanced specifically for the Mokubilo farm project.

<sup>3</sup> Lucara discloses payments to foreign governments in compliance with Canada's Extractive Sector Transparency Measures Act. Copies of this reporting can be accessed from our website at: [www.lucaradiamond.com](http://www.lucaradiamond.com). In addition to corporate tax payments, we also withhold and remit payroll, non-resident and value-added taxes in the jurisdictions in which we operate. Only corporate tax payments, on a consolidated basis, are included in the table above.



127 carat top colour Type II diamond, recovered late 2018

<b>SUPPLEMENTAL ECONOMIC INFORMATION (US\$ million)</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Employee compensation (Botswana)	8.1	10.5	12.6
Local procurement (national, Botswana)	93.0	103.6	137.1
<b>SUM</b>	<b>101.1</b>	<b>114.1</b>	<b>149.7</b>

### **2018: A RECORD YEAR FOR KAROWE**

- Record year for the recovery of Specials (> 10.8 carats)
- 829 special stones recovered, totaling 24,793 carats
- 33 diamonds recovered each greater than 100 carats
- 5 stones each greater than 300 carats
- 12 diamonds sold for more than US\$2million each
- One diamond sold for more than US\$10 million



Karowe processing facility with the DMS (dense medium separation) recovery unit to the left and main XRT (X-ray transmission) building to the right. Coarse tailings in the background.

## LUCARA BOTSWANA

Lucara Botswana, headquartered in Gaborone, is an indirect, wholly owned subsidiary of Lucara. Our main asset and sole operating mine is the Karowe open pit diamond mine. It is located within the Orapa/Letlhakane Kimberlite district, one of the world's most prolific diamond producing regions.



## MESSAGE FROM THE MANAGING DIRECTOR

With a total workforce of 792, which comprises 98 percent Botswana nationals, we take pride in our contributions to the socio-economic development of Botswana. In 2018, our contributions exceeded US\$ 173.2 million, including royalties and taxes (US\$23.5 million), employee compensation (US\$ 12.6 million), and national procurement (US\$ 137.1 million).

Rebranding the company to Lucara Botswana was an important milestone in 2018. Our employees now feel more connected with Lucara and its growing international reputation. It also underlines our desire to grow nationally.

We continue to pursue our growth strategy in Botswana on three fronts: progressing a feasibility study to review potential for underground mining development at the operating Karowe mine, drilling and sampling our prospecting licences AK11 and AK24, and through an exploration generative project seeking new kimberlite deposits using a propriety UAV magnetometer platform which allows more rapid and cost-effective prospecting.

With offices in the Diamond Technology Park in Gaborone, we maintain our good relations with government agencies, and provide diamond viewing and marketing opportunities within Botswana. In line with our commitment related to the UN Global Compact and support for the UN Sustainable Development Goals, we look forward to building on our local community engagement and investments, and developing new collaborations and partnerships at national level.

Naseem Lahri, Managing Director  
Lucara Botswana



While the proportion of women in the mining sector continues to be generally low, we promote and apply an equal opportunities approach regarding gender.

Appointing Ms. Naseem Lahri to the role of Managing Director in 2018 was the first such appointment of a Botswana woman to an executive position of a diamond mining company in Botswana. At Lucara Botswana, 50% of our executive team are women, complementing the 75% women on the Lucara Diamond Corp executive team.



## **MESSAGE FROM THE GENERAL MANAGER, KAROWE DIAMOND MINE**

In 2018, we realized the benefits of our focus on safety, operational excellence, state-of-the art processing, preventative maintenance and team work.

We continued to emphasize a prevention and behavior-based safety culture. This includes rolling out the "5 Steps to Zero Harm" awareness program and conducting "Safety Stand Downs" to appeal to the hearts and minds of people, encourage and celebrate outstanding performance.

In 2018, we achieved our goal of zero lost-time injuries. Based on this and other safety statistics, our operation received numerous excellence awards from the Botswana Chamber of Mines.

Our strong operational performance was supported by an unplanned, mid-year transition of our mining contractor to Trollope Mining. This resulted in a significantly improved mobile fleet availability and overall production. Combined with our innovative processing, which is supported by our contractors Lazenby and TOMRA, we recovered a total of 364,581 carats, including 829 Specials (single diamonds weighing in excess of 10.8 carats) in 2018.

During the second half of 2018, we participated in facilitated meetings and training between the Botswana Mine Workers Union and Karowe management, helping us to work towards a memorandum of agreement to guide our future working relationships.

We maintained our structured community engagement, contributed to and participated in numerous community events, such as traditional Kgotla meetings, and amicably resolved the one grievance recorded in 2018. We plan to strengthen our sustainability and community relations team in 2019.

Our community investment program includes the publicly owned Letlhakane Abattoir, the Mokubilo Farming Project operated as a community trust, and other initiatives detailed in this report. We continue to engage with local authorities regarding plans to develop a new sports and school complex, and opportunities to contribute to improving the reliability of water supply in Letlhakane, the town closest to our operation.

Johane Mchive, General Manager  
Karowe Diamond Mine



### **BOTSWANA AND DIAMONDS**

Since independence in 1966, Botswana has evolved from one of the poorest African countries with a population of around 600,000, to become economically stable and successful with 2.25 million inhabitants. Botswana has been one of the world's fastest growing economies, averaging 5 percent per annum over the past decade. However, its reliance on commodities renders it vulnerable to international market fluctuations. Real economic growth accelerated to 4.4 percent in 2018 (the fastest growth rate in the last five years) and is expected to remain around 4 percent up to 2021. Economic growth is driven by mining activity, construction, the services sector and intensified public investments. The contribution of mining to GDP has decreased in recent years as the country's economy diversifies and grows in other sectors, but diamond production remains around 30 percent of GDP.

The 342 carat "Queen of the Kalahari" recovered in April 2015

# CHARTER & POLICIES

Aligned with Lucara’s charter and policies, Lucara Botswana has also developed its relevant policies and charters as highlighted below. The complete version of the following charters and policies, which were last updated and/or approved in February 2019, are available at [www.lucaradiamond.com](http://www.lucaradiamond.com).

## Corporate Social Responsibility Charter

Lucara Botswana will initiate and promote an on-going dialogue with a broad range of stakeholders across our operation, maintained in a spirit of transparency and good faith. Lucara Botswana recognizes that effective stakeholder engagement can create value and mitigate risk for both the company and our stakeholders. We acknowledge that mining is, by definition, finite and therefore we will work to provide lasting, sustainable benefits in the communities where we live and work.

**OUR VALUES AND PRINCIPLES COVER**

- Continual improvements
- Zero harm
- Collaboration and sustainability
- Our people
- Our communities
- Value for shareholders and stakeholders

## Occupational Health and Safety Policy

Lucara Botswana is committed to creating a healthy and safe working environment for all employees, contractors and visitors. This means that we will actively train, educate and work with all employees and contractors to avoid conditions that may result in injuries. This policy, which can be accessed on our website, applies to all employees, contractors and visitors to the Karowe Diamond Mine.

## Environmental Policy

Lucara Botswana is committed to sustainable development, which requires that we minimize the short- and long-term adverse impacts of our activities on the environment. We will achieve this through the effective implementation of our approved Environmental Management Plan. This policy applies to all employees, contractors and other parties who may come into contact with our operations.

Lucara Botswana promotes environmental education and awareness in our operations and our local communities. We expect our employees, contractors and visitors to behave and conduct themselves in ways that protect the environment and actively seek to mitigate potential adverse impacts on the environment, through effective and efficient waste management, water use, energy use, biodiversity conservation practices and implementation of the closure plan.

## OPERATIONS & EXPLORATION ACTIVITIES

### Overview and Setting

Karowe, which means "precious stone" in the local Tswana language, lies on the northern fringe of the Kalahari Desert of central Botswana in a terrain of flat lying sandy savannah supporting vegetation of trees, shrubs and grasses. The natural vegetation is modified by cattle grazing and limited arable farming. The climate is hot and semi-arid with an average temperature of 21 °C and average annual rainfall of 370 mm. There are no permanent surface water bodies in the vicinity of the mine.

9 INDUSTRY INNOVATION AND INFRASTRUCTURE



We recognize the critical role of innovation, in creating a growing and sustainable diamond mining business in Botswana, as illustrated with these three examples. First, the early adoption of innovative technology, including modern X-ray Transmission and a Mega-Diamond Recovery plant, enabled our successful record for recovery of exceptionally large and high-quality diamonds. Second, through our joint venture with Sunbird, we utilize a proprietary unmanned aerial vehicle survey platform for rapid geophysical surveys covering large tracks of land with the goal to discover new kimberlites. And, third, our acquisition and development of the Clara rough diamond digital sales platform extends innovation to the value chain with secure traceability of diamond provenance using blockchain technology for our customers.



Excavating host rock in the Karowe Open pit operation

### Supporting Infrastructure

The mine property is accessed by 15 km of all-weather gravel road from the tarred road linking Letlhakane to Orapa. Karowe is one of four mines within 20 kilometres of Letlhakane, a village with a population of approximately 25,000.

Karowe's electric power supply is provided from the state-owned Botswana Power Corporation's national grid. Our water requirements are provided principally by the groundwater we collect for open pit dewatering and stability, supplemented with water recovered and recycled from kimberlite processing and when required, our local wellfield.



## Mining

During 2018, we transitioned to a new mining contractor, Trollope. This change introduced a more reliable equipment fleet which, in turn, enabled us to achieve our stripping, production and recovery goals.

## Processing

Early adoption of technological innovation has been a key success factor for our diamond recovery at Karowe. For example, ours was the first diamond mine to implement sensor-based bulk sorting for primary diamonds from run-of-mine material. This enables early detection and recovery of large diamonds, reducing risk of breakage during the milling process. Lucara Botswana and TOMRA, one of our contractors, continue to work together to further enhance this diamond recovery technique.

Lazenby Holdings, appointed as our processing contractor in 2017, continues to show strong performance, helping us achieve a record throughput of processed ore of 2.6 million tonnes during 2018. Adopting a strengthened preventative maintenance approach, and applying our 'stop and fix' policy, has contributed to record throughput and, at the same time, a strong safety record.

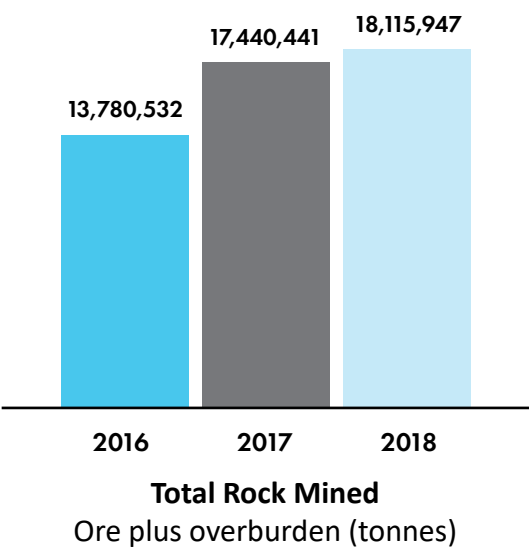
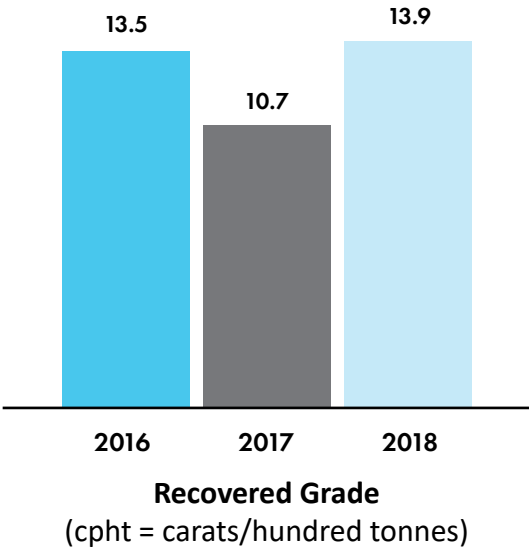
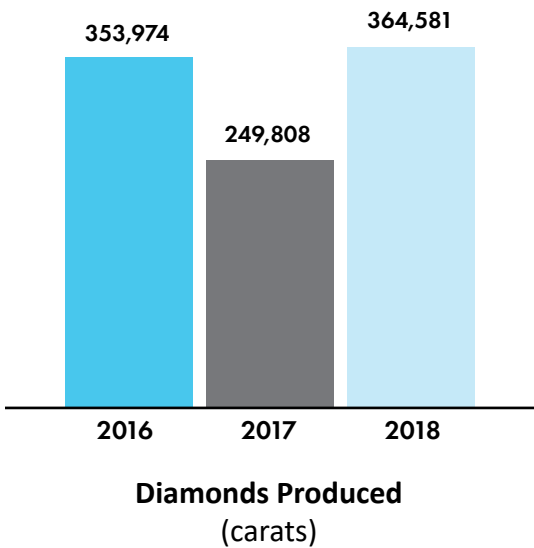
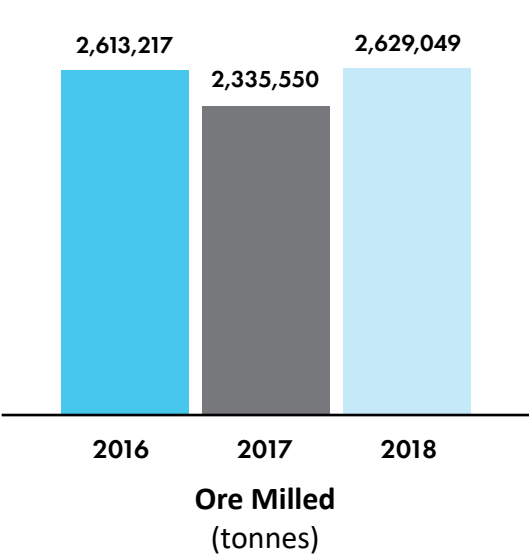
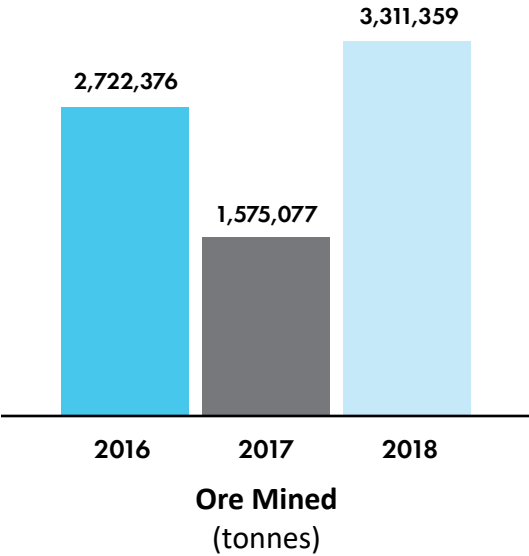
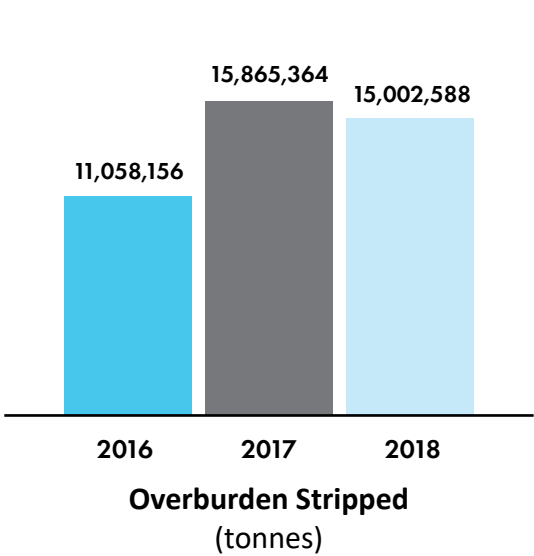
To further improve our processing efficiency, we installed an additional XRT circuit to conduct real-time audits of process plant tailings. A Bouvestnik X-ray luminescence sorter also conducts audits on current and historic recovery tailings. The adoption of these innovations enables immediate fine-tuning of our processes and recoveries which, in turn, improve overall revenue performance.

Conveying coarse kimberlite for additional size reduction



# PRODUCTION STATISTICS

In 2018, ore mined and overburden stripped was 3.1 million tonnes and 15.0 million tonnes, respectively. Tonnage milled was 2.6 million tonnes, well within our target range of 2.4 to 2.6 million tonnes. Diamond production totalled 364,581 carats, our highest since 2015.



## Feasibility Study

In 2018, following the release of a positive Preliminary Economic Assessment in November 2017, the Company embarked on a US\$29 million technical program to support a feasibility level study to evaluate the potential for an underground mining operation at Karowe. This program included a mineral resource update, geotechnical and hydrogeological drilling and modelling, and mining trade off studies. A total of US\$21.0 million was spent out of a 2018 budget of US\$29 million in support of this work. We expect the completion of the feasibility study in 2019.

## Exploration Activities

The AK11/24 prospecting licence was reduced by 50 percent in area and extended until the third quarter of 2019. At AK24, four holes were sampled for microdiamonds, but with disappointing results, so no further work is planned there. Restoration of the ground and surface vegetation was undertaken.

During 2018, an agreement was signed with Sunbird Exploration to focus on the discovery of new kimberlites using a proprietary unmanned aerial vehicle (UAV or drone) magnetometer survey platform within Botswana. Data acquisition commenced during the second quarter and continued through the fourth quarter of 2018, during which over 50,000 line kilometres of high resolution magnetic surveys were completed. Drilling of selected targets commenced during the third quarter of 2018. No kimberlites of economic interest were discovered in 2018, but work continues into 2019 on other significant targets identified. Sunbird holds 37 prospecting licenses covering 14,862 hectares in highly prospective regions in Botswana.

## Business Continuity Management

We apply a framework for business continuity, originally implemented in 2015, to protect our ability to continue to deliver critical services following a disruptive event. The objective is to build high-level resilience in all departmental services and sites when facing major adverse events. This adaptive capability also increases security awareness, minimizes financial impacts and effects on service delivery targets, improves understanding of functions and opportunities for improvement, enhances stakeholder confidence, protects corporate assets and reputation, and strengthens relationships with emergency response partners.

## Membership and Awards

Lucara Botswana is an active member of the Botswana Chamber of Mines. We received three awards in 2018 from the Botswana Chamber of Mines, all related to our health and safety performance.



Also, Karowe Diamond Mine's team received 2nd prize in the 2018 inter-mine first aid competition hosted by the Botswana Chamber of Mines.

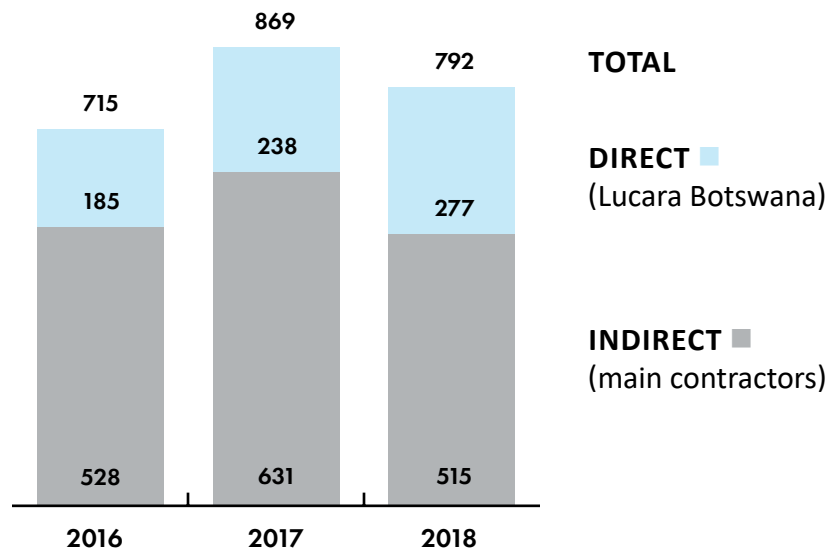
## OUR PEOPLE

Employee development and retention are fundamental components of a successful and sustainable business. We aspire to be an employer of choice and want our employees to be content, safe, healthy and proud to work for Lucara Botswana.

### Rebranding

An important initiative in 2018 was the rebranding of Boteti Mining to Lucara Botswana. This was received very positively by our employees who value our growth aspirations within Botswana. A more recognizable linkage with Lucara also bolstered employee sense of pride and inclusion.

## EMPLOYEES AND WORKERS



**98%** Botswana nationals in total workforce

**29%** Lucara Botswana employees are women

### National Workforce

At the end of 2018, our total workforce in Botswana – including mining and processing contractors – was 792 (nine percent down from 2017), of which 98 percent were Botswana nationals (unchanged from the previous year). The number of directly employed workers (for Lucara Botswana) increased by 16 percent to 277.

### Changing Mining Contractor

During 2018, we replaced our main mining contractor. Trollope, the incoming contractor, recruited a proportion of its 319 workers from the previous contractor. Currently, our main contractors are Trollope Botswana Pty for mining (40 percent of total workforce), Lazenby Holdings for milling (20 percent) and Minetech Pty for drilling and blasting (five percent).

### Low Staff Turnover

We completed the transition of our directly employed staff to permanent contracts in 2018. The turnover rate of Lucara Botswana's employees during the reporting period was four percent and slightly lower compared to 2017.

## Diversity and Gender

Our company features a high proportion of women in senior and executive management positions when compared to the mining industry in general. Through our internal promotion of Ms. Naseem Lahri to the position of Managing Director of Lucara Botswana, we also broke the glass ceiling for women occupying such a position in the country.

Senior positions held by women at Lucara Botswana include those shown below:

We apply an equal opportunities approach and, within this context, look forward to further increasing the proportion of women in the traditionally male-dominated mining sector. The number of women employed directly by Lucara Botswana has continued to increase, reaching 29 percent in 2018. The proportion of women in our total workforce (including main contractors) was 16 percent, an increase from 13 percent in 2017.

On age distribution, 23 percent of our direct employees are less than 30 years old, 70 percent between 30 and 49 years, and seven percent over 50.



**Ms. Naseem Lahri**  
Managing Director



**Ms. Tiny Tape**  
Grade Control Geologist

**Ms. Boitumelo Maoketsa**  
Chief Finance Officer

**Ms. Nametsegang Poloko-Nthake**  
Finance Manager, Compliance & Reporting

**Ms. Montilia Jacob**  
Mine Accountant

**Ms. Constance Rakesiilwe**  
Human Resources Superintendent, IR & Services

**Ms. Amogelang Bogacu**  
Human Resources Superintendent, Organizational Development

**Ms. Florence Kumbula**  
Financial Accountant



**Ms. Tebalebo Ramothogobeng**  
Process Engineer, Production



**Ms. Kesego Kereemang**  
Safety & Occupational Health  
Coordinator

## Performance Management

Our human resources related performance management system has five generic objectives, set out in our Employee Handbook, by which all Lucara Botswana employees are expected to live and work by:

**Integrity:** to act in an ethical, respectable and principled manner to uphold high moral ground at all times.

**Fairness:** to deal with all our stakeholders in a manner that is procedurally equitable, taking cognisance of issues of natural justice and empathy.

**Accountability:** to take total ownership of all actions within your sphere of influence to deliver desired results.

**Tenacity:** to be innovative and not give up in your drive to achieve your objectives.

**Communication:** to be responsive and proactively keep all stakeholders informed at all times.

We have increased our focus on training and development support to our employees having provided 75 courses in 2018 compared to 30 in 2017. We offer localisation and succession plans, when appropriate. All employees receive annual career development reviews as part of our performance management system. Exit interviews and occasional employee surveys support our efforts to better understand and improve employee satisfaction and staff retention. We have a 2019 goal to gain accreditation for our training programme and to develop a talent management strategy.



All workers, including contractors, attending a 'Safety Stand Down' presentation from the management team on health, safety and wellness

## Benefits

Our employee handbook provides guidance to employees and details of our expectations. The handbook covers issues such as disciplinary code, statutory labour requirements, labour case law, good labour practice, and our tiered grievance procedure.

Our permanent staff receive a housing allowance, medical aid subsidy, statutory required maternity leave, and group life insurance. In place of a pension scheme, employees are paid a gratuity (a form of pension) every three years. We also provide financial literacy training to employees. Our employees benefit from 12 national holidays each year, in addition to statutory leave.



## Labour Issues

Aligned with our commitment to the UN Global Compact and local regulations, we uphold the freedom of association, elimination of forced or compulsory labour, the effective abolition of child labour, and the elimination of discrimination in respect of employment and occupation.

During the second half of 2018, we participated in facilitated meetings and training events between the Botswana Mine Workers Union and Karowe management, helping us to work towards a memorandum of agreement to guide our future working relationships. By the end of 2018, 67 percent of our direct employees were unionized. We maintain good workplace relationships and an open-door policy where employees are free to raise issues and discuss them with management.

## Strikes or Lockouts

Our operations did not experience any strikes or lockouts during the reporting period, and no complaints of discrimination or other types of human right violations or related grievances were recorded during 2018.

## Grievance Mechanism

We maintain a formal grievance procedure. Employees are encouraged to, first, approach their line manager or human resources representative. If concerns remain unresolved, a grievance is escalated up to the General Manager or Managing Director. Union members may also pursue their grievances through their union representative. No formal employee grievances were recorded in 2018.

Lucara Botswana staff in front of the autogenous mill

# HEALTH & SAFETY

## Safety Culture

Health and safety are paramount to our responsibilities and working culture. In addition to rules and training, we apply a regular program of communication to ensure all employees (including contractors) constantly keep health and safety top of their minds in every aspect of their daily activities, duties and planning.

Our approach is encompassed in our ongoing program of Behaviour-Based Safety headed by our list of "Cardinal Sins" (see box on page 32). This information is posted in all workplaces and is intended to maintain constant awareness and promote responsible behaviour in all activities.

**3 GOOD HEALTH AND WELL-BEING**

High health and safety standards and performance of our workers and contractors are our priority. We are proud to have recorded zero lost time injuries in 2018. In addition to basic health and safety at work, our focus on good health and well-being includes regular health assessments for all workers, and extending health and wellbeing to their families and local communities through sports events and health screening programs.

We encourage all employees to report all unsafe and potentially unsafe conditions and near misses, so we can reduce the likelihood of their repetition. This is encompassed in our "Stop & Fix" policy to encourage immediate action to act on identified risks. Every employee is required to report at least one "Stop & Fix" issue each week. Pre-task risk assessments must be undertaken. Road safety, on and off site, also remains an important focus. We have installed vehicle speed monitoring systems at strategic locations and created a mandatory brake-testing facility for vehicles entering the pit area.



Billboard with reminders ondisplaying Lucara’s commitment to a a strong safety culture

All employees are issued with a small "Safety in Your Pocket" handbook to keep with them for easy reference to 25 separate health, safety and environmental areas.

In 2018, we initiated a new health and safety awareness programme called "5 Steps to Zero Harm" which we communicate through training, presentations and posters in the work place, including at the mine pit. Our performance in health and safety is monitored and reported regularly to both the Lucara and Lucara Botswana Safety, Health, Environment, Community Relations and executive committees.

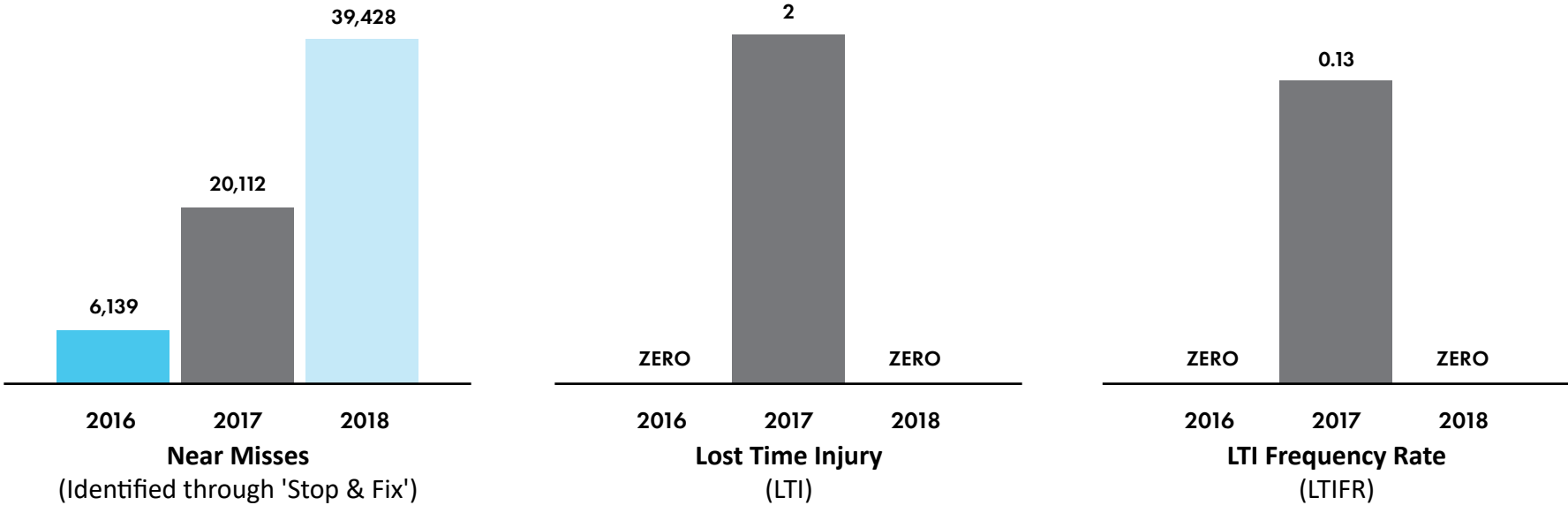
We are proud to have recorded zero lost time injuries in 2018. We had two reportable injuries requiring minor medical treatment, with no lost time. Our reporting of near misses has continued to rise. We view this as a reflection of our risk prevention policy of increased vigilance and reporting, and as a key driver to improving our health and safety performance. Additional health and safety statistics are included with the GRI Index posted on our website ([www.lucaradiamond.com](http://www.lucaradiamond.com)).

Our principal contractors for mining and milling are fully integrated into our health and safety programmes and culture, but also have their own initiatives as independent companies.

We apply a continuous improvement approach to Health, Safety and Wellness. We periodically hold a "Safety Stand Down" when regular work is paused and all workers come together to further promote the concept of health and safety awareness and vigilance, and to celebrate and award good practices as appropriate.

While recognising our culture of increased vigilance and reporting has resulted in an overall increase in reported incidents, we remain committed to ensuring this leads to ongoing improvement in health and safety performance.

### HEALTH & SAFETY STATISTICS





## Occupational Health & Safety

### Safety

Working on a mine site exposes our employees and contractors to health and safety risks that need to be carefully managed. We actively educate and work with all employees and contractors to avoid conditions that may result in injury.

In accordance with our Occupational Health and Safety Policy, we endeavour to integrate health and safety into all of our business processes and activities. All levels of management, supervisors and contractors have a responsibility to ensure the safety of all employees and workers under their direction, and to ensure they are properly trained and equipped.

All employees and contractors receive safety training at commencement of employment and regularly throughout their career. All are expected to maintain safe work sites through involvement in health and safety committee meetings, and by conducting safety inspections. During the transition to a new mining contractor, Trollope, we shared all health and safety experiences from the previous contractor to ensure they would benefit from this.

During 2018, we undertook an internal audit against the internationally recognized standard for Occupational Health and Safety, OHSAS 18001. We achieved a score of 60 percent and identified opportunities for improvement. In response, we plan to improve our scoring to 80 percent as we transition from OHSAS 18001 to ISO 45001 by the end of December 2019.



Safety billboard along roadway in processing facility

Each shift maintains a joint health and safety committee that addresses new regulations, site procedures, and actions to improve health and safety, and an emergency response capability suited to its working environment and risks. Each shift also includes staff trained and appointed as first aiders, as safety, health, environment representatives and as members of our fire response team. Groups who work together regularly meet as health and safety 'pacts' to review what they could do to reduce incidents.

We have a Fatigue Management Plan in which managers are trained on how to recognize fatigue in workers, and how to act on it. In a program, initialized in 2018, and actioned in 2019, employee family members are invited to Karowe to understand the work environment and allow them to engage in fatigue management.

## KAROWE DIAMOND MINE CARDINAL SINS

Reckless driving

Overtaking on haul road

Engaging in physical fighting

Rendering safety devices inoperable

Concealing an incident or injury on duty

Operating plant without authorization  
or failing to complete pre-start checklist

Working on equipment/machinery  
wilfully without lockout or isolation

Coming to work under the influence  
of intoxicating substances

## Health and Wellness

We conduct medical examinations on all employees and workers, including contractors, at the start and at termination of employment. Direct employees also receive a monthly health check and main contractors, an annual check at our onsite clinic. We keep medical data in accordance with relevant standards. We employ two private medical doctors to visit the mine site two times per week to be available for anyone who wishes to consult them. We have an onsite health care unit with an occupational health nurse to provide consultation, to dispense medicines and make referrals to the doctors as appropriate. The nurse reports to the safety, health, environment and community relations manager.

The clinic offers a continuous emergency response service for all incidents and accidents. Urgent referrals are sent to Orapa or Letlhakane hospitals.

We have created a culture of health promotion for all employees and workers in an effort to prevent workplace injuries and occupational diseases. Topics covered include HIV/AIDS, tuberculosis, body mass rating, diabetes, and hypertension.

No noise induced hearing loss or other occupational disease cases were recorded in 2018.

## Wellbeing

We organize periodic events to promote sport and healthy activity amongst our workers, their families and communities. In June, we hold an annual "Karowe Mine Cycling Challenge" for which we encourage our employees, contractors and their families to participate. We also host wellness days at the mine with sporting activities and presentations.

## ENGAGEMENT

Our core value of Respect requires us to respect and listen to our people, our communities and our local governments. We are, therefore, committed to listening to our internal and external stakeholders, and endeavour to address their concerns and needs.

1

NO  
POVERTY



Our operations contribute directly to Botswana's ongoing economic development, with the mining sector being key to lifting the country out of poverty since independence in 1966.

Lucara Botswana contributes through direct and indirect employment, and payment of taxes and royalties (US\$ 23.5 million, see also page 15), which supports the government and its poverty alleviation measures throughout the country.

### Structured Engagement

Our structured Stakeholder Engagement Plan sets out our objectives, mechanisms, frequency and responsibilities for stakeholder engagement throughout the mining lifecycle at the Karowe Mine, as summarized in the table overleaf. We maintain a dedicated office in central Letlhakane, the village nearest to the Karowe Mine, welcoming anyone who wishes to learn about our activities or raise questions or concerns. In addition, we regularly attend Kgotlas (see next paragraph), community meetings and other events to connect with our stakeholders.

### Traditional Kgotla Meetings

On a rotating basis, each quarter we visit six of the eighteen villages across the surrounding district to participate in the village Kgotla, a traditional community meeting. We conduct an annual workshop with the leadership of these villages to learn about their expectations and concerns, be accountable about our operations and social investments, and identify opportunities for improvement. Examples of such opportunities identified, and actions taken, include a redirection of our micro-lending program from supporting private entrepreneurs towards community-trust owned beneficiaries, as detailed further below. We also bring the knowledge and culture of our safety and wellness programs to Kgotla meetings to stress their relevance to all aspects of daily life, not just work.

### Mine Site Visits

We welcome and provide mine site visits for traditional, elected and appointed government officials interested in learning more about our operations. In 2018, we had the opportunity to host a Member of Parliament, District Officer, Senior Assistant Council Secretary, Sub- District Chairman, Village Development Committee members, and other officials.

### Materiality Workshops

For the 2018 sustainability reporting process, we conducted a series of dedicated materiality workshops. This included workshops held in Botswana with representatives of local communities, beneficiaries of our community investment programs, company management, and top tier contractors. The outcome of these workshops is summarized in the "Our Materiality Issues" section of this report. The table on the following page lists our key stakeholder groups, how we engage with them, issues they have raised, our responses and opportunities.

## Our Approach to Stakeholder Engagement

ENGAGEMENT	KEY ISSUES	ACTIONS & RESPONSE
<b>ADJACENT LAND USERS</b>		
Ad hoc and structured in-person meetings, as required, and as part of structured community meetings.	Access to groundwater, road safety and dust emissions.	Installed monitoring wells, respond to concerns, road safety campaigns, road maintenance and dust suppression.
<b>LOCAL COMMUNITIES</b>		
Structured Kgotla community meetings, annual evaluation workshops. Rotating 'Take wellness to the community' day in local villages.	Contribute to positive socio-economic development and impacts. Promote health & wellness in all communities.	Respectful engagement, support local hiring, assist with social investments and programs.
<b>EMPLOYEES &amp; UNIONS</b>		
Open door policy, formal engagement during unionization, grievance mechanism, events for employees & workforce, exit interviews & occasional surveys. Safety awareness 'stand down' meetings.	Remuneration, safety & wellness, training and development.	Transition to employee contracts without term limits, strengthened safety programs, provide training opportunities.
<b>CONTRACTORS &amp; SUPPLIERS</b>		
Partnership and collaboration with main contractors to share best practices in efficient operations, and health & safety goals.	Profitable & predictable business relationships and contracting, timely decisions and payments, safe working conditions.	Follow good international practice, define performance and payment terms, support safety programs.
<b>DEVELOPMENT PARTNERS</b>		
Collaboratively developed partnerships and programs.	Longer-term resourcing and support, realistic expectations.	Adaptive and collaborative project and program management.
<b>CUSTOMERS &amp; SOCIETY</b>		
Regular diamond tenders within Botswana, membership and/or attendance at industry association and events, participate in certification schemes, publish sustainability reports. Develop Clara traceability and sales platform.	Responsible and reputable mining, product quality and provenance (no conflict diamonds), social licence to operate.	Adopt responsible and transparent mining practices, build & maintain good community relations, contribute to local socio-economic development, participate in Kimberley and RJC* certification schemes, published assured sustainability and ESTMA* reporting.
<b>SHAREHOLDERS</b>		
Investor relations program, analyst briefings, statutory disclosures, independent directors on the board.	Good financial performance, good corporate governance, sustainable mining practice, reputable products, timely updates.	Implement responsible and profitable mining, adopt good governance practices, participate in Kimberley and RJC* certification, digital presence, technical and sustainability reporting.
<b>GOVERNMENTS &amp; AGENCIES</b>		
Concessions, negotiations, permitting, monitoring, meetings, reporting, site visits.	Ethical conduct and corporate governance, financial contributions, local socio-economic development, environmental stewardship.	Ethical business conduct, audited financial statements, environmental & social impact assessments and management plans, disclosure of payments to governments, assured sustainability reporting.

\* RJC is the Responsible Jewellery Council; ESTMA is the Extractive Sector Transparency Measures Act of Canada

## Grievance Mechanism

Our community engagement officer is regularly available to meet with any member of the public who wishes to ask questions or discuss any matters of concern. In the event someone is not satisfied with initial discussions, they may formally register a grievance.

We maintain a formalized grievance mechanism to receive, log, acknowledge and address grievances which may be associated with our operations. Such grievances are assessed and followed-up as appropriate.

In 2018, we recorded one formal grievance relating to failure of a water well pump at a farm near our mining operation. An inspection identified that this pump failure was due to a faulty power connection with no link to our operations, and the grievance was amicably resolved.

### REGISTERED GRIEVANCES AND OUTCOMES

Year	Grievances	Comments and Response
2016	0	None
2017	1	Sanding of a livestock farmer's shallow well was determined to be unrelated to Karowe mine. Resetting pump resolved the problem.
2018	1	A farmer (the same as in 2017) reported his well was not pumping water. We visited and identified this was due to a poor power connection to his pump. The issue was amicably resolved.

## Security and Loss Control

Our security and loss prevention program is designed to protect our people, assets and operations while respecting human rights, local and federal laws, and local communities. We also engage with our local community to raise awareness about crime and security risks through a dedicated Security Roadshow. We conduct research and inform the community on the types of crime and threats present, and how to identify and counter them. We have implemented such a roadshow in the Letlhakane area and plan to extend it to Gaborone with the intention to include awareness raising on illegal diamond dealing and its adverse impacts, which includes loss of royalties for Botswana.

Our security and loss prevention team's experience includes former police force members with training in law and human rights. We have aligned our security program with the Voluntary Principles on Security and Human Rights, the United Nations Guiding Principles on Business and Human Rights. Our induction and training materials continue to emphasize our commitment to respectful engagement and international human rights.

In 2018, approximately 77 percent of the Lucara Botswana's security team received training on the Voluntary Principles on Security and Human Rights. Additional training is scheduled for mid-2019 to cover the remaining team members. We recorded no security-related grievances in 2018.

## IMPACT INVESTMENT

Our contributions to the development of our host communities go beyond creation of jobs, generating taxes and payment of royalties, described in the "Economic Performance" section. We also collaborate with the Lundin Foundation and other development partners, and continue to support young entrepreneurs, strengthen important community infrastructure, through initiatives such as the Letlhakane Abattoir and the Mokubilo Cooperative Society Farm.

We are collaborating with the Debswana operations on a project to share our excess water (from pit dewatering) with them, thereby allowing them to reduce their direct groundwater abstractions (see below, Public Water Supply Challenges). Furthermore, we continue to pursue an opportunity to develop a school and sports complex, and review the challenges associated with the water infrastructure of Letlhakane which has been leaving some of its residents without access to water from time to time.

### Lundin Foundation

Lucara is a contributing partner to the Lundin Foundation, a registered Canadian non-profit organization supported by the Lundin Group of Companies (to which Lucara belongs), which helps us create shared value and build resilient communities. Key initiatives developed with the support of the Lundin Foundation are described further below. We contributed approximately US\$481,000 to the Lundin Foundation in 2018.



The redeveloped Letlhakane abattoir, an important link in the cattle farming value chain

### Letlhakane Abattoir

Our single largest investment in recent years involved the redevelopment of the publicly owned abattoir in Letlhakane, following persistent shut downs due to hygiene and other concerns. The abattoir is an important link in the value chain of cattle farming, which contributes significantly to local livelihoods. The redevelopment of the abattoir – which included an entirely new structure and compound – was constructed and achieved in partnership with the Central District Council, which is the facility owner/operator.

The abattoir employs 17 workers and generated approximately US\$85,000 in revenues from September 2017 to December 2018, nearly tripling its annual revenues. We continue to support our partner, focusing on strengthening institutional and management capacity of the abattoir. This includes exploring innovative public-private partnership models for professional abattoir management to ensure sustainable operations and long-term benefits for the community.

## Supporting Entrepreneurs

Previously, we established the Karowe Emerging Entrepreneurs Fund (KEEF). This facility was designed to provide loans and advisory support to a successive cohort of micro-entrepreneurs. The successful applicants ranged from a goat farmer to a brick manufacturer. However, insufficient loan repayments highlighted a need to re-adjust the underlying business model of KEEF, while continuing to support its beneficiaries. To achieve this, we started our collaboration with the new Local Enterprise Authority (LEA), a government sponsored agency established to support and train local entrepreneurs. The KEEF beneficiaries have now transitioned to and are being supported by LEA to help them become more resilient and viable businesses.

## Karowe Villages Initiative

In 2018, we initiated the Karowe Villages Initiative, starting with the launch of Mokubilo Co-operative Society Farm.

## The Mokubilo Farming Project

In 2018, we launched an innovative village-based program in partnership with Mokubilo village, located approximately 100km east of the Karowe Diamond Mine close to the main road to Francistown. The Farm is a community-owned, commercial farm designed to address malnutrition, provide affordable and locally available vegetables and protein, and employment opportunities for young men and women in remote rural communities in a sustainable manner.





Mokubilo farming project – the management board and farm manager

The Farm is owned by a community trust and overseen by a village-appointed management board and a technical advisory committee. From the outset, the Farm is designed to become financially viable so that the benefits can be sustained in the village over time. The Farm has also integrated solar energy for its water and irrigation system and lighting needs, reducing its overall environmental footprint.

The Farm production consists of a range of vegetables and eggs. The crops include cabbage, spinach, canola, tomatoes, green pepper, beetroot, carrots and butternut squash. After meeting the nutritional needs of the village school, excess farm produce and eggs will be offered for local sale. The first harvest and sale of farm produce was completed in early 2019.

In 2018, the Lundin Foundation, using donations from Lucara Botswana, provided all the start-up and operating costs, and technical advisors.

<b>2</b> ZERO HUNGER 	<b>8</b> DECENT WORK AND ECONOMIC GROWTH 	<p>We contribute to reducing the risk of hunger in Botswana through our role in national and local economic development. In addition, in specific recognition of the ongoing challenge of malnutrition parts of Botswana, and working with and through Lundin Foundation, we supported the start-up of the Mokubilo Farm. This project has two main aims: first, to directly grow and provide food produce to nearby villages and schools, and second, to operate as a model farm and help other farmers improve their production and livelihoods.</p>
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Farmworker at Mokubilo community farm

### **Sports Complex and School**

We continue to engage with local authorities on the development of the new multi-purpose sports complex in Letlhakane. The concept and feasibility studies were completed in 2017. The required land has been identified and design and engineering are expected to commence in 2019. We are also exploring opportunities to incorporate a new school as part of the new sports complex to help alleviate a shortage of schools in Letlhakane.



## Scholarships and Donations

In 2018, we continued to support best performing pupils in mathematics, science, English and extra curricula activities by donating approximately US\$5,000 [BWP50,500] in support of award ceremonies at eight junior and secondary schools in the Boteti District, which hosts our mining operation. We also donated approximately US\$50,000 (BWP514,742) for a range of organisations and activities, including village celebrations and cultural events, to schools and their associated hostels (week-time boarding for children) and a community choir.

4 QUALITY EDUCATION



With Botswana nationals representing 98 percent of our employees including senior management positions, we help create the incentive for young people to pursue higher levels of education by providing high-quality employment opportunities. We also sponsor school prizes in local communities for children and teachers, including for mathematics, science and English, for which we contributed approximate US\$5,000 in 2018. In addition to the direct benefits and motivation to prize winners, this helps create an atmosphere of joy, pride and ambition for school education.



Lucara Botswana HR Officer Recruitment handing prizes to the Best Students in Mathematics, English and Science at Mopipi Junior Secondary School in Mopipi Village

## ENVIRONMENTAL PERFORMANCE

### Overview

Our environmental impact assessment for Karowe describes impact mitigation measures under the following main themes: biophysical, ecological, land use, socio-economic, public health and safety, occupational health and waste management.

Our environmental performance at Karowe is managed by a dedicated Environmental Officer reporting to the Safety, Health, Environment and Community Relations (SHECR) Manager. We plan to add three new positions and transition the SHECR Department to a Sustainability Department in 2019.

Significant incidents and performance are reported monthly to Lucara's senior management and discussed quarterly during meetings of the SHECR Committee at the Lucara Botswana and Lucara board level.

We promote environmental awareness, expecting all employees, contractors, other parties and visitors to conduct themselves in ways that respect and protect the natural environment, and avoid or mitigate potential adverse impacts through effective and efficient waste management, water use, energy use, biodiversity conservation practices and implementation of our closure plan.

### Environmental Management Plan

Our Environmental Management Plan (EMP) was developed in line with the requirements of Botswana's Environmental Impact Assessment Regulations (2012). The EMP is aligned with ISO 14001 and includes the following specific plans:

- Health and Safety Plan
- Biodiversity Action Plan
- Groundwater Control Plan
- Corporate Social Investment and Labour Plan
- Heritage Plan
- Stakeholder Engagement Plan
- Grievance Response Procedure
- Emergency Response Plan
- Community Health Safety and Security
- Management Plan
- Waste Management Plan

As we continue to progress the feasibility study for a potential underground mining operation at Karowe, we will also update the EMP, including the Closure and Rehabilitation Plan. The next gap analysis of the EMP is expected to be completed in 2019.



## Land Management

The area of disturbed land continued to increase in 2018 due to ongoing execution of the mining plan, and mainly the planned increase to the footprint of waste rock storage areas. Lucara Botswana is committed to undertaking progressive rehabilitation and restoration of land at the appropriate timing and plans to develop test plots to this aim.

<b>LAND MANAGEMENT (hectares)</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>
Total Amount of Land Owned*	1523	1523	1523
Total of Land Disturbed	465	486	498
Total Amount of Land Newly Disturbed Within the Reporting Period	43	21	13
Total Amount of Land Rehabilitated Within the Reporting Period	0	0	0
Total Amount of Land Rehabilitated and Handed Over to Local Government	0	0	0

\* Karowe Mine Licence

## Biodiversity

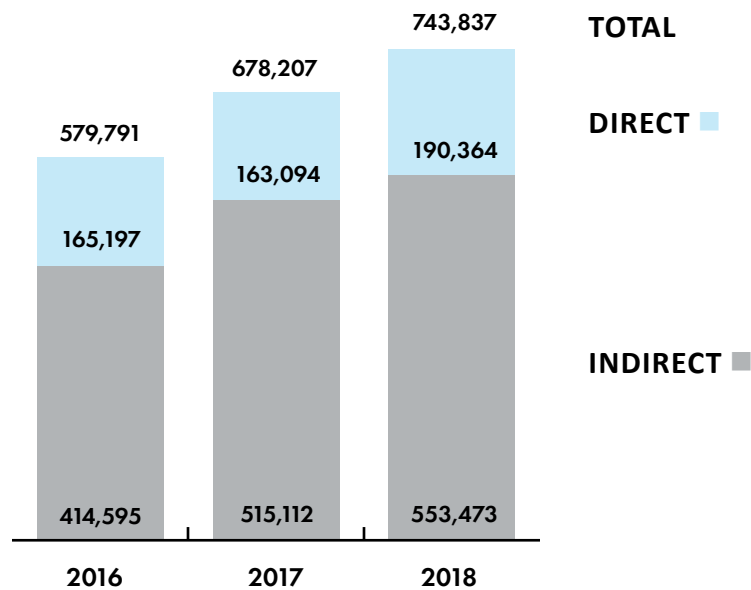
The broader area hosting the Karowe Mine was historically modified through cattle grazing and other pastoral activities and the region hosts several other diamond projects and operations.

The main natural vegetation types are mopane woodland and savannah scrub on mostly level, sandy terrain. A variety of large animals occur in the region, including gemsbok, hartebeest, wildebeest, kudu, ostrich, dika and impala, and rare sightings of elephant. Lions and leopards are occasionally spotted on the mine property. Small animals include various snake species, lizards and tortoises. Bird life is not particularly diverse but includes the protected cape vulture.

Mining operations result in vegetation and wildlife being disturbed and in the operational footprint areas. The environmental impact assessment concluded overall impact was low due to the absence of rare or endangered species. Some species in the area are threatened by gathering and hunting by the local communities, but we prohibit such activities on the mine lease area. Lions, if spotted and captured, are relocated to the Orapa game park for their own and human protection.

In accordance with our biodiversity action plan, we clear vegetation only when required, protect woody vegetation where practicable, and implement an invasive species eradication program. Our environmental management and mine closure plans state our intention to replace topsoil and re-vegetate disturbed areas.

## ENERGY USE



(GJ = gigajoule = 1,000 million joules)

### Power Supply

Karowe operations are powered by electricity supplied by the state-owned Botswana Power Corporation (BPC), which is a public utility. The BPC operates two coal-power power stations and imports electricity from ESCOM in South Africa. In line with the government of Botswana's Vision 2036 and commitments under the Paris Climate Agreement, the BPC continues to explore opportunities to engage independent power producers to develop 100MW in solar PV power and reduce the country's carbon footprint.

### Electricity Consumption

The electricity supply to the mill accounts for the bulk of our indirect energy use. Electricity use increased in 2018 by approximately 17 percent compared to 2017, reflecting an increase in the volume of ore milled. We continue to review how we can improve our energy efficiency.

We monitor energy usage and have maintained our power factor - a measure of efficiency in alternate current electricity systems - at 0.98 compared to a target of 0.99. Karowe experienced two significant power interruptions during 2018, one for eight hours and one lasting 16 hours, both caused by the collapse of power poles during heavy rains. However, power security is now significantly improved by a new second incoming power line, providing a back-up in the event of failure or maintenance of the first line.

### Diesel Consumption

Diesel fuel, consumed by the mobile equipment fleet operating at Karowe, accounts for the bulk of our direct energy use. This increased by seven percent in 2018 compared to 2017, reflecting an increase in our overall mining activities as we completed a significant waste stripping campaign which started in 2017. We are reviewing how driving style, the grading of haul roads and other factors might impact on fuel use in order to identify opportunities for further efficiencies.

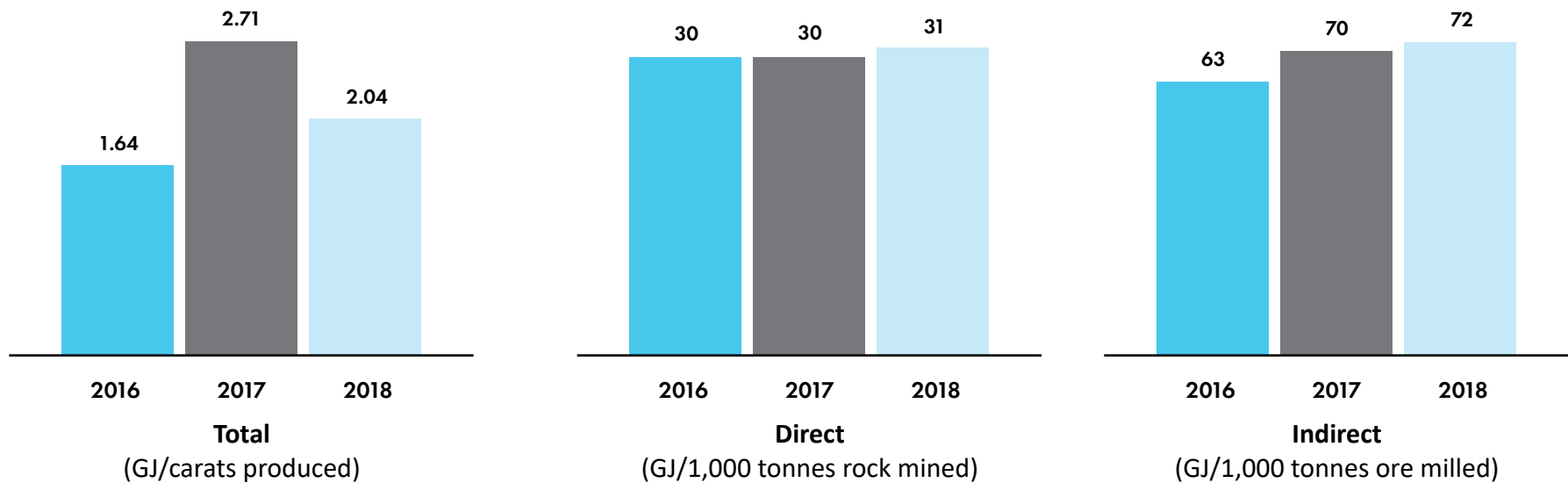
## Exploring Renewables

We continue to consider opportunities to reduce our energy and carbon footprint. In 2018, we reviewed the cost-benefits of replacing diesel-powered generators supplying our remote groundwater wells. Our study found that installing solar PV and storage solutions was less economical compared to connecting the wells to grid electricity. In response, we connected one remote borehole to electricity in 2018. We have also reached out to independent power producers to further explore the broader business case and innovative options to introduce renewable energy at Karowe.

## Energy Intensity

We report energy intensity in three ways: (1) gigajoules per 1,000 carats produced; (2) gigajoules of direct energy per 1,000 tonnes of rock mined, on the basis that rock mining relies principally on diesel; and (3) gigajoules of indirect energy per 1,000 tonnes of ore milled, on the basis that milling relies principally on electricity. The intensity in GJ/1,000 carats decreased in 2018 (for direct and indirect energy use) after a number of years of year-on-year increase. Energy intensity relative to tonnes of ore milled (direct and indirect) show an increasing trend.

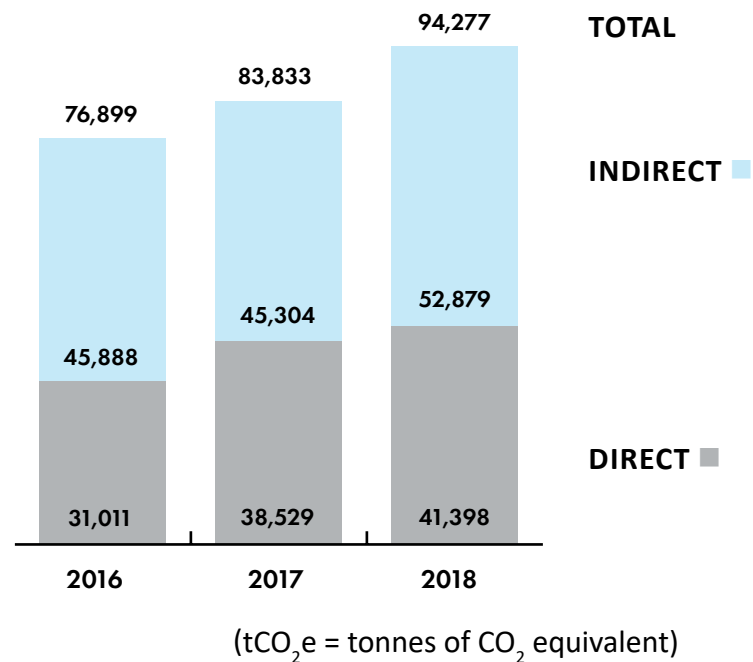
## ENERGY INTENSITY





Mega Diamond XRT (X-ray transmission) facility or MDR (mega diamond recovery) unit

## GREENHOUSE GAS EMISSIONS



Source for GHG conversion factors: For diesel fuel, UK DEFRA 2018.  
For electricity, UNFCCC CDM

Although we plan to review our options for introducing renewable energy, our potential for achieving a significant reduction in GHG intensity will be limited over the short term as the mining fleet will continue to be diesel powered. Our electricity is derived entirely from the national grid supplied by Botswana’s coal power plants supplemented by some imports.

### Climate Change Risk

In Botswana, climate change could affect rainfall patterns, soil erosion and groundwater recharge. Botswana already has a challenging climate with risks to agricultural production, food security and water availability.

As part of the December 2015 Paris Agreement to combat Climate Change, Botswana communicated its intent to achieve an overall emissions reduction of 15 percent by 2030, using 2010 as the base year. Botswana also communicated it would be targeting mainly the energy and transport sectors for mitigation of GHG emission reductions.

Projected effects of climate change in Botswana and its government’s policy responses are not expected to materially impact Lucara Botswana’s operations in the near to medium term. We will continue to monitor the emerging renewable energy landscape in Botswana as it may provide opportunities to reduce our GHG emissions footprint. In 2019, we will undertake an energy audit to prepare for the development of a climate action plan.

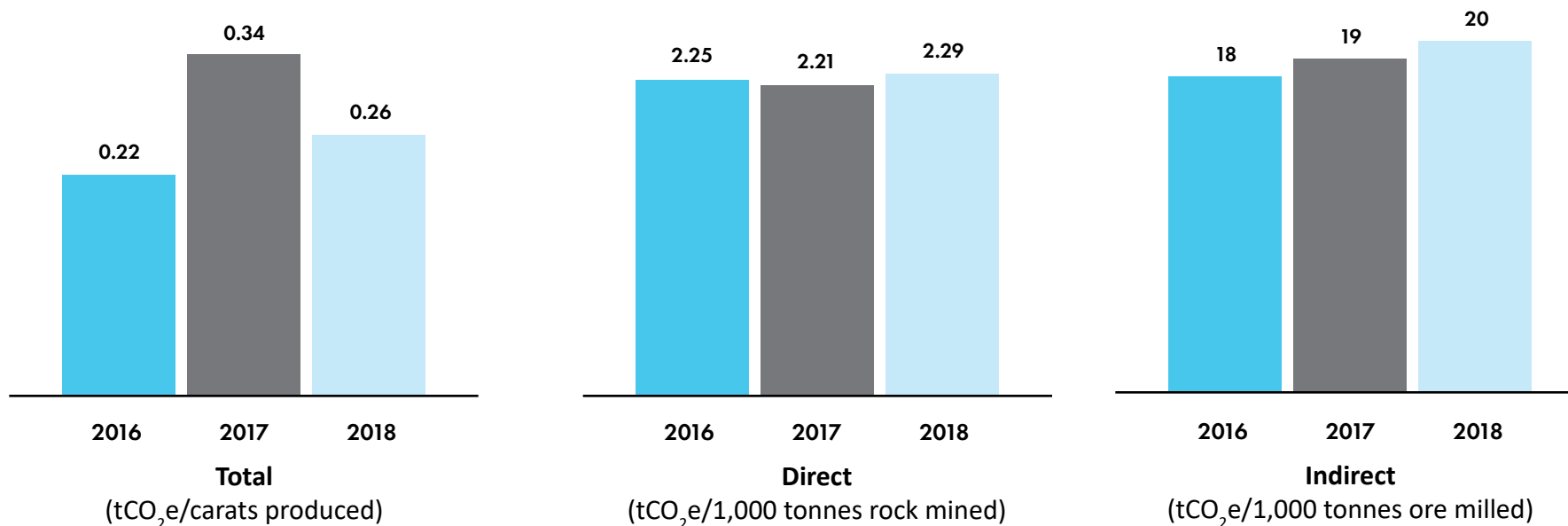
### GREENHOUSE GAS EMISSIONS INTENSITY IS REPORTED IN THREE WAYS

**Normalized by carats produced:** Total tCO<sub>2</sub>e per carats produced

**Normalized by rock mined:** as tons of carbon dioxide equivalent per 1,000 tonnes (tCO<sub>2</sub>e/1,000 tonnes) of total rock mined. This takes account of the fact that the principal source of Scope 1 emissions is from the diesel fuel used to move rock. This result is relatively steady over the past three reporting periods.

**Normalized by ore processed:** as tCO<sub>2</sub>e/1,000 tonnes of ore processed. This takes account of the fact that the principal source of Scope 2 emissions is from the electricity used to power the mill. This shows a slight increase over the same three-year period.

## INTENSITY OF GREENHOUSE GAS EMISSIONS

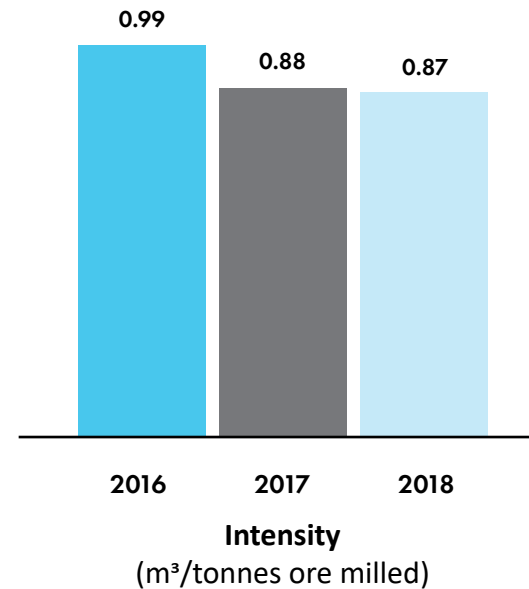
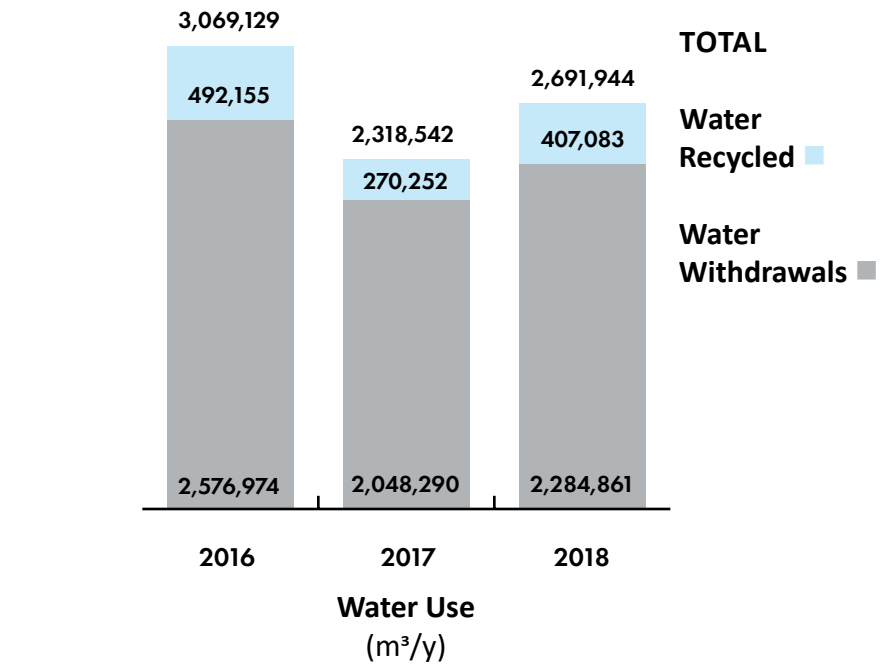
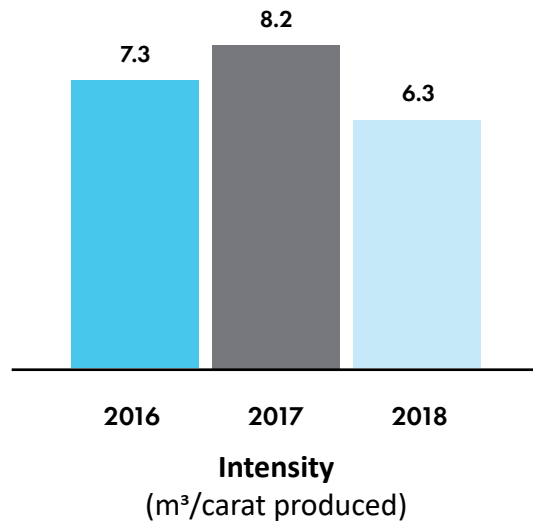


## Water Use and Management

The local climate and absence of permanent surface water bodies in the region mean water access is a critical issue for local communities, agricultural activity, for our operation and for other mines operating in the region. We employ a dedicated on-site hydrogeologist to help us carefully manage and monitor our water use and impacts. We issue a detailed annual groundwater monitoring report to regulators.

### Water Use

We pump groundwater from twenty-two boreholes located around the open pit mine to lower water levels and keep the mining excavation dry, stable and safe. This water, combined with a separate wellfield of six boreholes, provides all our water needs, for process water, dust suppression and drinking water. Dewatering represents approximately 70 percent of our water abstractions and the wellfield about 30 percent. We also use a water treatment system based on reverse osmosis technology to generate water for use in sensitive equipment and for potable uses at Karowe.



Intensity based on Water Withdrawals (not including recycling)  
Municipal water use in our offices in Lethakane, Gaborone and Vancouver are not deemed to be material.



## Water Intensity

The volume of water we extract varies from year-to-year depending on our dewatering requirements, water needs and hydrogeological conditions. Total water withdrawal increased by 12% compared to 2017. Total water use increased by 16%, which includes an increase in the recycling rate.

Our volume of recycled water in 2018 was equivalent to 18 percent of groundwater withdrawals, used principally in the mill. Recycled water is derived from kimberlite processing and decanting from the slime dams. Recycling and other factors contributed to a significant reduction of our water use intensity.

We do not expect our water withdrawal requirements to exceed 2.5 million cubic meter per year (m<sup>3</sup>/year) for the current operation compared to a permit limit of 8 million m<sup>3</sup>/year.

6 CLEAN WATER AND SANITATION



We employ a fulltime onsite hydrogeologist to manage and monitor our water extraction and wastewater activities to minimize negative impacts on communities or nature. We investigate and address water-related concerns or complaints. We also initiated a dialogue with the water utility to identify collaboration opportunities aimed at further improving the reliability of a safe, clean water supply in Letlhakane, the village nearest to our mining operation.

## Water Abstraction Impacts

The aquifers we pump from, at over 100 metres depth, are extensive across central Botswana, and also the water source for other mining operations, and for Letlhakane municipal supply, the latter located at a distance of approximately 10 kilometres from the Karowe Mine. The capacity and depth of the aquifer means it is not impacted by low rainfall periods, such as the 2015/16 drought. Our water usage does not impact on neighbouring farm wells, which draw from a physically separate and shallow aquifer, as confirmed by our network of monitoring wells.

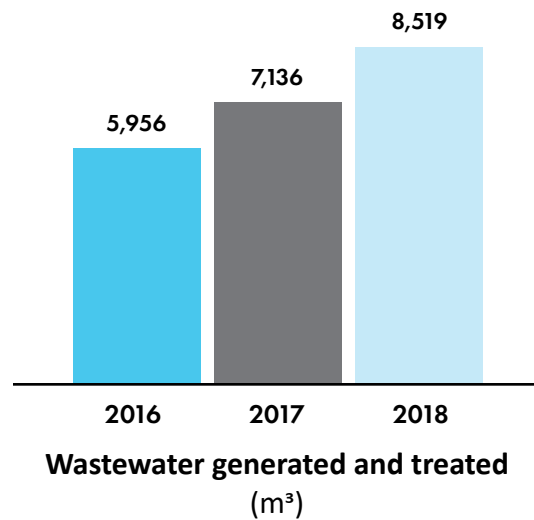
## Pollution Prevention

We apply responsible international practices to avoid groundwater pollution. Our onsite landfill, expected to become fully licensed in 2019, is lined with a membrane; transformers are PCB free and constructed to prevent leakage. The flocculent we use to separate slime solids from the mill process water is a safe product, routinely used for wastewater treatment around the world, and classed as non-hazardous.

We discharge no water or wastewater away from the site. Water losses occur as seepage and evaporation losses from the slime dams, and during use for dust suppression on the access road.

## Wastewater Treatment

Our wastewater treatment plant treats sanitary effluents to a quality compliant with surface water discharge standards, including disinfection of pathogens. We use the treated water to irrigate lawns and gardens around our office buildings. Solid waste from wastewater treatment is either incinerated or stored as fertilizer for future land restoration areas. Following a regulatory inspection recommendation, we plan to line a pond for treated effluent storage. The treated effluent will be used for irrigation of vegetation around the wastewater plant.



## Public Water Supply Challenges

Public water supplies to communities in Letlhakane experience periodic water supply interruptions. These can last for multiple days. Although unrelated to Karowe's operations or water use, we initiated a dialogue with the state-owned Water Utilities Corporation to identify suitable support and collaboration opportunities.



Thickener and processing water storage

We are also in discussion with Debswana, which operates diamond mines in Orapa and Letlhakane, to provide them with surplus groundwater from Karowe. This water could be used by Debswana as process water and, in turn, enabling them to reduce abstractions from the aquifer which also supplies local communities.

## Water-related Grievance

We received a single water-related complaint in 2018 from a farm located at a distance of approximately four kilometers from the mine, the same farm that registered a complaint in 2017. In both cases, we visited the farm to investigate, and were able to satisfy the farmer that his concerns were not linked to our activities. In 2018, his pump had ceased working due to a poor power connection, which was easily and amicably resolved.

## Waste Management

Our environmental management plan details our waste management strategy and approach. We segregate our waste streams into three main categories: inert, general, and special wastes, the latter including classes of hazardous waste. We have five waste management facilities within the mine lease area: a landfill, a sewage treatment plant, a salvage yard, and two fixed incinerators, mainly for oily rags.

### On-site Landfill

We installed a landfill for non-hazardous, non-recyclable waste in accordance with Botswana's guidelines, including installation of a protective membrane lining. Following a number of requested improvements, the inspection by the regulator in November 2018 raised no issues, and we expect the full licence to be awarded in 2019.

### Salvage Yard

Our salvage yard is used to sort and store a range of waste materials, including scrap metal, light vehicle tires, oil, grease and fluorescent tubes, prior to removal off site to appropriate facilities. Oil is stored in a bunded area with periodic removal and offsite disposal. Used car batteries are stored safely and periodically removed for recycling or safe disposal.



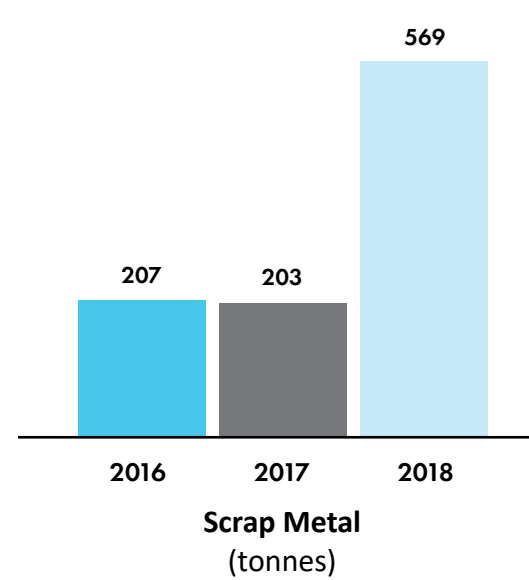
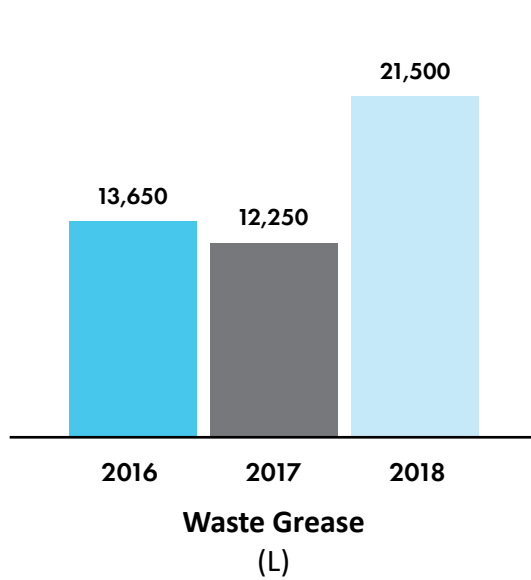
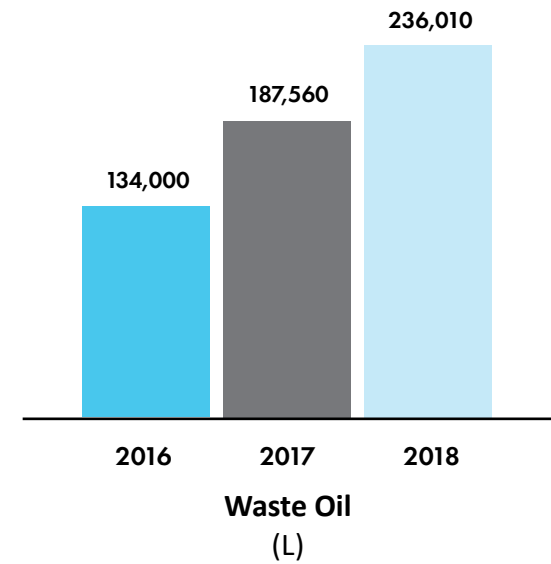
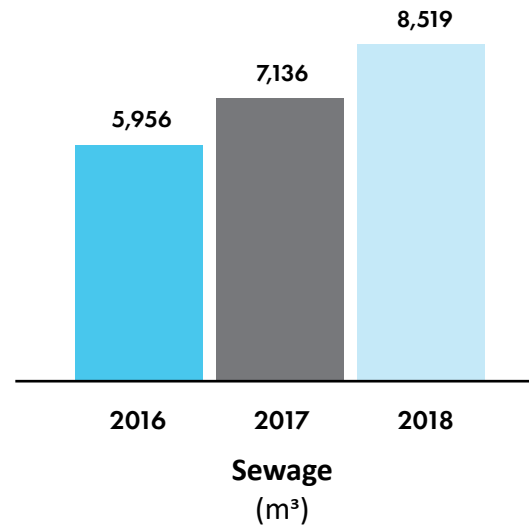
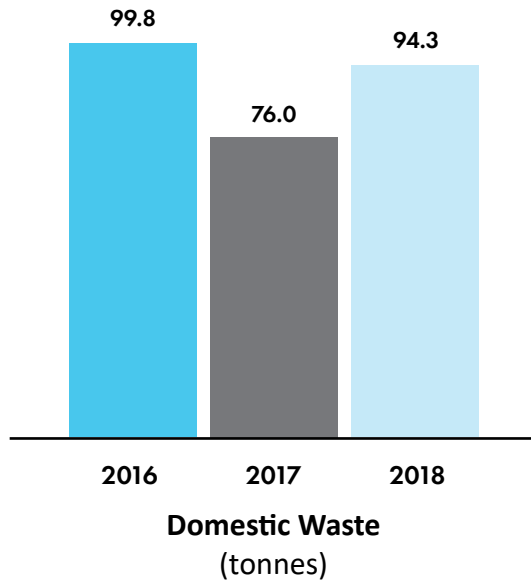
Mega Diamond Recovery (MDR) units

We recorded 21,080 kg of incinerated hazardous waste, incinerated onsite, with the ashes disposed of at the onsite landfill. The mine generated 44,000 litres of oil contaminated water during 2018, which is collected by an authorised waste oil collector with part being recycled and the rest going to a municipal wastewater facility. Our diamond cleaning facility in Gaborone generated 204 litres of hazardous liquid chemical (including acids, sodium hydroxide and methanol). Associated effluent is neutralized before authorized discharge to the municipal industrial wastewater facility.

### Truck Tires

Disposal of large truck tires from mining operations remains an unresolved issue for the mining sector in Botswana, including Karowe. The Botswana Chamber of Mines is exploring options with the government, which is likely to include some recycling. We will continue to store tires onsite until a solution becomes available.

## WASTE DISPOSAL



## **Waste Volumes**

Our waste statistics show a general increase in 2018 and more than for recent years. Waste grease and waste oil increased mainly due to increased maintenance on the older mining fleet prior to the mining contractor replacement in mid-2018. Scrap metal increased due to scrapping of old trucks by the mining contractor, whilst copper increased due to offcuts generated during recent plant upgrades.

## **Waste Rock**

The open cast mining of our deposit requires the removal or stripping of overburden and waste rock to provide access to the diamond-bearing kimberlite ore. Overburden stripping was completed in 2012. Since then only host rock has been removed, referred to as waste rock. The volume of waste rock varies year-to-year depending on the geology and progress of ore mining. We stripped a similar amount of waste rock in 2018 compared to 2017, but mined nearly twice as much ore (see "Production Statistics" graphs, page 23).

## **Tailings Management**

Rock remaining after processing the kimberlite ore comprises coarse and fine tailings materials, which we deposit in designated areas. We use no chemical additives for ore processing, so tailings contain no deleterious substances. The coarse material is deposited onto an engineered dry-stack storage facility. The fine tailings storage facility consists of four paddocks, constructed adjacent to each other, that are filled according to a scheduled sequence. Only one paddock is operational at any given time. Water is captured and recycled for use in the processing plant. We use no chemical additives for ore processing so tailings are composed only of varying sized fractions of kimberlite with no deleterious substances.

Inspections of all storage facilities is stipulated by the Mines and Quarries Act, with daily inspections conducted by qualified employees and annual inspections by qualified independent consultants. Government inspections are also conducted throughout the year. Statutory reports are provided to the relevant government department based on findings from both internal and external technical experts. There were no reportable incidents in 2018.

Lucara Botswana uses a risk-based approach to assessing potential hazards that is reviewed annually and for planned paddock wall raising. In response to major incidents at tailings storage facilities internationally, Lucara undertook a gap analysis at the Karowe Diamond Mine. No major findings were discovered.

The risk associated with the tailings storage facility failure are low. In addition to the precautionary measures summarized above, as well as regular maintenance of the fine tailings paddocks, the surrounding topography of the mine site is flat with no surface water in the vicinity. The nearest communities are in excess of four kilometres from the mine site.

## **Dust Fallout Management**

Dust fallout concentrations observed during 2018 at 12 sites around Karowe and the access road were in compliance with the South African residential and non-residential area standards, the applicable benchmark for our operation. We routinely apply water for dust suppression on the unpaved mine access road since adjacent communities can be affected. We monitor dust levels and respond with mitigation as needed and have recently installed additional dust filtering and extraction technology on our process machinery. No grievances concerning dust fallout were recorded during 2018.



Aerial view looking west displaying water storage, processing plant and open pit

## Environmental Expenditures

As in previous years, our most significant environmental expenditures in 2018 were related to management and extension of our coarse rock tailings and fine tailings facilities, and activities associated with preparations for eventual mine closure and rehabilitation, including financial provisioning.

### KEY ENVIRONMENTAL EXPENDITURES (US\$)

	2016	2017	2018
Tailings and slimes management (capital)	2,275,052	1,435,998	1,260,665
Environmental monitoring	69,460	51,687	22,224
Waste management	107,979	132,233	201,045
Rehabilitation and mine closure	1,294,886	1,586,026	2,219,487
<b>TOTAL</b>	<b>3,746,886</b>	<b>3,205,945</b>	<b>3,703,421</b>

## Decommissioning and Site Restoration

Lucara Botswana is committed to progressive rehabilitation and restoration of land at appropriate timing following exploration and mining activities. The projected liability for decommission and site restoration is approximately US\$26 million for a projected Life of Mine to 2026. The closure plans and associated estimates are expected to be revisited by the end of 2019, also in response to the results of the on-going feasibility study reviewing the potential for an underground mining operation at Karowe.

## Significant Incidents

We maintain an incident register, and record and report significant incidents using a tiered classification and reporting system. No major environmental incidents were recorded in 2018. Incidents recorded were generally 'insignificant' (L1, the lowest level under Botswana Chamber of Mines classification), such as small oil spills from machine breakdown or leaks from water or sewage pipes. These were immediately contained and cleaned.

## No Fines or Sanctions

We received no fines or monetary sanctions for non-compliance with environmental laws and regulations during 2018. We experienced no reportable non-compliance incidents.



## Supply Chain Sustainability

Lucara's rough diamonds are at the start of the supply chain of the diamond trading, polishing and jewellery sector. Our adherence to the Kimberley Process and our certification under the Responsible Jewellery Council schemes ensures and demonstrates tracking, ethical trade and responsible mining practices associated with our produced rough diamonds.

We use contractors where such companies may carry out tasks more efficiently or more effectively than we can ourselves. The Karowe Diamond Mine currently uses mining and ore processing contractors, representing our most material suppliers, with a main contractor workforce totalling 515 at the end of 2018. These contractors source mining equipment including trucks, loaders and other vehicles, crushing equipment, fuel and lubricants, explosives, and safety equipment.

In addition to utilizing government security services and our own security personnel, we engage a contractor to assist with the security of our diamonds during their transport from the mine site to secure storage and subsequent sales in our dedicated office space within the Diamond Technology Park in Gaborone.

Our supply chain includes national and international suppliers. We aim to source materials and services from within Botswana, thereby generating local and national socio-economic benefits. In 2018, 92 percent of goods and services for Lucara Botswana were sourced from Botswana. In 2018, we selectively audited our contractors to review compliance with the Code of Conduct and Business Ethics and other requirements.

Diamond sizing of Karowe production for further sorting prior to tender



220 carat diamond recovered in early 2019

**CLARA DIAMOND SOLUTIONS**



# CLARA

## **Supply Chain Innovation**

Clara is an exciting technological business solution for the diamond industry uniquely positioned to transform and modernize the sales process, and facilitate sales of rough diamonds individually, rather than in batches. Clara leverages proprietary analytics together with the latest cloud and blockchain technologies to sell diamonds stone by stone, based on customer specific requirements and needs. The result is a completely streamlined, "pull" style supply chain that creates efficiencies, and unlocks value for buyers and sellers alike. Clara Diamond Solutions Corporation is a wholly owned subsidiary of Lucara, acquired in February 2018.

## **Successful Launch**

Clara's sales platform was launched in November 2018 and the final matching of sales and purchase orders for the inaugural sale was completed in December 2018. The trial sale was successfully completed in partnership with seven, large and vertically integrated jewellery houses and global diamond manufacturers.

## **Matching Supply and Demand**

Clara's process includes scanning and sorting of every rough diamond individually to create a unique digital fingerprint. This automated process captures a range of attributes including size, colour, quality, and cut potential – and removes human subjectivity and error. The digital information, along with provenance information for each diamond, is uploaded to the Clara platform where the rough diamond is available for sale. Diamond manufacturers can place specific orders based on their precise needs. Clara's proprietary technology finds the optimum match of supply and demand, stone by stone, thus replacing the traditional system of buying a parcel of rough diamonds.

## **Unlocking Value**

Diamond sales successfully matched to orders during Clara's inaugural sales generated total rough diamond sales volumes of US\$660,865, realizing eight percent over Lucara's estimated market price, and 15 percent over Lucara's reserve price for these goods. Additional benefits include reducing working capital needs associated with unwanted inventory, and elimination of secondary market trading losses of unwanted stones typically procured in traditional parcel purchases. These savings are expected to be realized and shared across the diamond supply chain, not only for the benefit of the diamond miners.

## **Ensuring Provenance**

Clara's automated scanning and sorting of individual diamonds, along with the use of a cloud-based digital blockchain system, enhances the transparency and traceability of diamond provenance for each diamond from mine to finger.



Materiality analysis workshops held at Karowe, Letlhakane and Gaborone

## MATERIALITY ANALYSIS

# MATERIALITY ANALYSIS

In line with the GRI Standards, we define our material topics as those which reflect our significant economic, environmental, and social impacts, or could substantively influence the assessments and decisions of our key stakeholders.

In preparation of our 2018 sustainability reporting, and building on material topics and sustainability context identified in our reporting since 2012, we conducted a series of internal and external workshops in Botswana, as listed below. These workshops were facilitated by external consultants.

1. Karowe Diamond Mine’s and main contractors’ management (18 participants)
2. Community representatives and impact investment beneficiaries (18 participants)
3. Lucara Botswana’s senior management at Gaborone office (4 participants)

The outcome of these workshops and emerging material topics were discussed and validated with Lucara’s executive management. The seven material topics incorporated into Lucara’s 2018 reporting are tabulated and detailed further below.













Karowe processing facility and tertiary crusher building







OUR MATERIAL TOPICS 2018	Lucara Diamond Corp.	Lucara Botswana	Clara
Innovation	●●●	●●●	●●●
Product Stewardship	●●●	●●●	●●●
Procurement	●	●●●	●
Community Development	●●	●●●	
Health, Safety and Wellness	●●	●●●	●
Partnerships	●●	●●●	●●
Environmental Stewardship	●●	●●●	

●●● = strong link; ●● = important link; ● = some link; Blank = no or limited link

## Our Material Issues

INNOVATION	PRODUCT STEWARDSHIP	PROCUREMENT	COMMUNITY DEVELOPMENT
<b>WHY IMPORTANT</b>			
Critical to all aspects of our business to ensure sustainable and successful growth.	Responsible mining practices and provenance are essential to establishing and maintaining trust with our customers.	Local/national procurement creates positive economic impacts and shared value.	Supporting local communities is essential to maintain our social license and to leave a positive legacy following eventual mine closure.
<b>BOUNDARY</b>			
Lucara Diamond Corp., Lucara Botswana, Clara, Diamond value chain, Investors.	Lucara Diamond Corp., Lucara Botswana, Clara, Host Government, Jewellery supply chain, Investors.	Lucara Botswana, Local Community, Host Government.	Lucara Botswana, Development partners, Local Community, Host Government.
<b>APPROACH</b>			
We are early adopters of technology and good business practices from exploration (drone surveys) to recovery (large diamond recovery using XRT technology) and sales (Clara).	We comply with, participate in, or are certified by the Kimberley Process, Responsible Jewellery Council, the UN Global Compact.	Routinely seek to identify and utilize local/national suppliers of goods and services which can meet quality, safety, cost and other competitive criteria.	In collaboration with local communities, government, and development partners, we identify and support impactful socio-economic initiatives.
<b>EVALUATION OF APPROACH</b>			
2018 record recovery of 829 of Specials (> 10.8 carats), totaling 24,793 carats (ca. 70%) of revenues. Women top executive positions. Successful launch of Clara sales platform.	Maintained compliance Kimberly Process. We were re-certified by Responsible Jewellery Council in March 2018	Need to collect more segmented data, recognizing that high-value capital goods are unavailable locally.	Limited micro-loan repayments required redirection to capacity building, and start-up of community-owned projects.
<b>TARGETS</b>			
Continue to optimize systems, engage additional jewellery houses and ramp-up sales for Clara.	Maintain and further strengthen compliance and certifications.	Enable segmented procurement tracking for future reporting	Continue to support initiatives, plan school and sports complex, and explore collaboration to improve access to water.
<b>GRI DISCLOSURES</b>			
Not available. Included qualitative descriptions.	GRI 417-1, 417-2, 417-3	GRI 204-1	GRI 413-1
<b>KEY UN SDGS</b>			
  	 		   

## Our Material Issues (Continued)

HEALTH, SAFETY & WELLNESS	PARTNERSHIPS	ENVIRONMENTAL STEWARDSHIP			
<b>WHY IMPORTANT</b>					
Core part of our responsible mining practices, aligned with regulatory requirements and Global Compact, healthy and happy workers are critical to our success.	Critical to successful business, magnifies community development, and supports SDGs and Botswana's development strategy.	Core part of our responsible mining practices, host country regulatory and RJC certification requirements.			
<b>BOUNDARY</b>					
Lucara Diamond Corp., Lucara Botswana Clara, Contractors, Local Communities, Host Government, Investors.	Lucara Diamond Corp., Lucara Botswana, Clara, Main contractors, Local Communities, Host Government, UN Global Compact and SDG.	Lucara Diamond Corp., Lucara Botswana, Main Contractors, Local Communities, Host Government, Buyers.			
<b>APPROACH</b>					
Integrated part of corporate values and priorities, provide training, weekly meetings, and '5 Steps to Zero Harm' program.	Collaborate closely with contractors, Implement structured engagement plan, Be accountable to local communities, Collaborate with development partners.	Maintain environmental policy, Conduct impact assessments, Implement management and monitoring plans, Subject to external audits.			
<b>EVALUATION OF APPROACH</b>					
Award-winning performance in Botswana. Zero lost time injuries in 2018.	Record business and safety performances with help of contractors in 2018, Modified approach to community development based on results and feedback.	Updated Environmental Management Plan (EMP) in January 2019, Maintained RJC certifications, No fees or fines imposed.			
<b>TARGETS</b>					
Zero lost time injuries.	Continue to expand engagements to leverage delivery on SDGs.	Zero significant environmental incidents, Update EMP for underground mining, when required.			
<b>GRI DISCLOSURES</b>					
403-1, 403-2	Not available. Qualitative descriptions provided.	302-1, 302-3, 303-1, 303-2, 303-3, 307-1			
<b>KEY UN SDGS</b>					
 3 GOOD HEALTH AND WELL-BEING	 8 DECENT WORK AND ECONOMIC GROWTH	 16 PEACE, JUSTICE AND STRONG INSTITUTIONS	 17 PARTNERSHIPS FOR THE GOALS	 6 CLEAN WATER AND SANITATION	 12 RESPONSIBLE CONSUMPTION AND PRODUCTION



Conveyors leading to main XRT (X-ray transmission) buildings

# ASSURANCE STATEMENT

# INDEPENDENT ASSURANCE REPORT TO THE MANAGEMENT AND STAKEHOLDERS OF LUCARA DIAMOND CORPORATION

## INTRODUCTION

IBIS ESG Assurance (Pty) Ltd (IBIS) was commissioned by Lucara Diamond Corporation (Lucara) to conduct an independent third-party assurance engagement in relation to the sustainability information in Lucara's Sustainability Report (the report) for the financial year that ended 31 December 2018.

IBIS is an independent licensed provider of sustainability assurance services. The assurance team was led by Petrus Gildenhuis with support from Adam Sutton-Pryce and Alain Mahieu. Petrus is a Lead Certified Sustainability Assurance Practitioner (LCSAP) with 20 years' experience in sustainability performance measurement involving both advisory and assurance work.

## ASSURANCE STANDARD APPLIED

This assurance engagement was performed in accordance with AccountAbility's AA1000AS (2008) standard and was conducted to meet the AA1000AS Type II moderate level requirements.

## RESPECTIVE RESPONSIBILITIES AND IBIS'S INDEPENDENCE

Lucara, is responsible for preparing the report and for the collection and presentation of sustainability information within the report, notwithstanding any third-party support in compiling the report.

IBIS applies a strict independence policy and confirms its impartiality to Lucara in delivering the assurance engagement. This assurance engagement is the third consecutive assurance engagement conducted for Lucara by IBIS.

## ASSURANCE OBJECTIVES

The purpose of the assurance engagement was to provide the management of Lucara and their stakeholders with an independent moderate level assurance opinion on whether the report meets the following objectives:

- Adherence to the AA1000APS (2008) AccountAbility principles of inclusivity, materiality and responsiveness.
- Alignment to the GRI Standards in respect of the 'core' reporting requirements (p 1).
- Fair reporting on a selection of operational Key Performance Indicators (KPIs) as related to the identified material issues listed below.
  - Total amount of water used and water use intensity (p 46)
  - Total direct and indirect energy used and energy use intensities (p 43)
  - Scope 1 and 2 GHG emissions and intensities (p 45)
  - Waste disposed in the different categories (p 50)
  - Number of fatal injuries (GRI Index, Appendix 3)
  - Lost Time Injury Frequency Rate (LTIFR) (p 30)
  - Absenteeism rate (GRI Index, Appendix 3)
  - Percentage of Botswana nationals in workforce (p 25)
  - Directly employed staff turnover (p 25)
  - Community investment spend (p 15)

## **WORK PERFORMED BY IBIS**

IBIS performed the assurance engagement in accordance with the AccountAbility AA1000AS (2008) Type II requirements. The following suitable assessment criteria was used in undertaking the work:

- AA1000APS (2008) (AccountAbility Principles Standard) published criteria for inclusivity, materiality and responsiveness respectively
- The GRI Standards
- Lucara's sustainability reporting guideline

Our assurance methodology included:

- Interviews with relevant functional managers at Lucara's Karowe operation to understand and test the processes in place for adherence to the AA1000APS stakeholder engagement principles and the selected disclosures in the assurance scope
- A site visit to the Karowe operation, which involved testing, on a sample basis, the measurement, collection, aggregation and reporting of selected sustainability information
- Inspection and corroboration of supporting evidence to evaluate the data generation and reporting processes against the assurance criteria
- Reporting the assurance observations to management as they arose to provide an opportunity for corrective action prior to completion of the assurance process
- Assessing the presentation of information relevant to the scope of work in the report to ensure consistency with the assurance observations

## **ENGAGEMENT LIMITATIONS**

IBIS planned and performed the work to obtain all the information and explanations believed necessary to provide a basis for the assurance conclusions for a moderate assurance level, in accordance with AA1000AS (2008).

The procedures performed in a moderate assurance engagement vary in nature from, and are less in extent than for, a high assurance engagement. As a result, the level of assurance obtained for a moderate assurance engagement is lower than for high assurance as per AA1000AS (2008).

## **ASSURANCE CONCLUSION**

Based on the work undertaken for moderate assurance as described, we conclude that the subject matters in the scope of this assurance engagement have been prepared in accordance with the defined reporting criteria and are free from material misstatement in respect of:

- Lucara's adherence to the AA1000APS principles of inclusivity, materiality and responsiveness
- The report's alignment with the GRI Standards' core requirements
- The selected disclosures identified under assurance objectives above and as presented in the published report.



## KEY OBSERVATIONS AND RECOMMENDATIONS

Based on the work set out above, and without affecting the assurance conclusions, the key observations and recommendations for improvement are as follows:

### In relation to the inclusivity principle

Lucara maintains a formal Stakeholder Engagement Plan that sets out the objectives, mechanisms and responsibilities for stakeholder engagement with a broad range of relevant stakeholders. A specific focus on community engagement was noted.

### In relation to the materiality principle

As part of Lucara's materiality determination process it conducted a series of materiality workshops involving local community representatives, beneficiaries of community investment programs, Lucara management and top tier contractors. The report reflects the most material issues experienced by Lucara as well as those raised by external stakeholders.

### In relation to the responsiveness principle

Traditional community meetings were held at key villages in the district to share information and record issues raised. Several Government stakeholders have also been included in engagement activities throughout the reporting period. Responses to issues raised were found to be directly related to the stakeholder concerns and were conducted in a timely, fair and appropriate manner without prejudice to any one stakeholder group. On-going dialogue with a broad range of stakeholders across the operation is recommended to maintain transparency, mitigate risks arising and create value for both Lucara and its stakeholders.

### In relation to GRI reporting

A review of the report against the GRI Standards indicated that Lucara effectively reports in accordance with the GRI Standards - "core" disclosure requirements

### In relation to the selected KPIs

Although IBIS is satisfied with the final data accuracy in the assurance scope, it is noted that some environmental data inconsistencies were identified during the audit that had to be corrected. It is recommended that going forward, effective management review controls are implemented to reduce the occurrence of environmental data errors.

A comprehensive management report detailing specific findings and recommendations for data reporting improvement has been submitted to Lucara management for consideration.



### Petrus Gildenhuys

Director, IBIS ESG Assurance (Pty) Ltd  
Johannesburg, 28 June 2019



**AA1000**  
Licensed Assurance Provider  
MMJ NRS

The assurance statement provides no assurance on the maintenance and integrity of sustainability information on the website, including controls used to maintain this. These matters are the responsibility of Lucara.



Karowe open pit mine

**CAUTIONARY STATEMENT**

## CAUTIONARY STATEMENT

This sustainability report contains forward-looking statements and information as defined in applicable securities laws including: the estimates of the Company's mineral reserve and resources; estimates of the Company's production volumes; forecasted sales volumes and pricing; projected revenues of the Company; exploration and development plans and objectives including a new resource statement; estimated production costs, exploration and development expenditures; estimates of ore to be mined by the Company and corresponding operating and sustaining costs; and the cost, timing and results of the commercialization of Clara. Generally, these forward-looking statements can be identified by the use of forward-looking terminology such as "expects", "anticipates", "believes", "intends", "estimates", "potential", "possible" and similar expressions, or statements that events, conditions or results "will", "may", "could" or "should" occur or achieved. Forward-looking statements are based on the assumptions, opinions and estimates of management as of the date such statements are made, and they are subject to a number of known and unknown risks and uncertainties which may cause the actual results, performance or achievements of the Company to be materially different from any future results, performance or achievement expressed or implied by such forward-looking statements. In particular, such risks include general business and economic conditions, changes in interest and foreign currency rates, the supply and demand for, deliveries of and the level and volatility of prices of rough diamonds, costs of power and diesel, acts of foreign governments and the outcome of legal proceedings, inaccurate geological and recoverability assumptions (including with respect to the size, grade and recoverability of mineral reserves and resources), unanticipated operational difficulties (including failure of plant, equipment or processes to operate in accordance with specifications or expectations), cost escalations, unavailability of materials and equipment, government action or delays in the receipt of government approvals, industrial disturbances or other job actions, adverse weather conditions, unanticipated events relating to health safety and environmental matters, delays or failure to successfully commercialize Clara's platform, acceptance of Clara's platform by the diamond industry, risks relating to the technology underlying Clara's platform and other risks inherent in the implementation of new technologies, and other risks and uncertainties describe under Risks and Uncertainties disclosed under the heading "Risk Factors" in the Company's most recent Annual Information Form available at <http://www.sedar.com>.

Forward-looking statements and information speak only as of the date the statements were made, and the Company does not assume any obligations to update or revise them to reflect new events or circumstances, except as required by law. Readers are cautioned not to place undue reliance on forward-looking statements and information. This presentation does not constitute an offer or invitation to purchase or subscribe for any securities and no part of it shall form the basis of or be relied upon in connection with any investment decision in relation thereto.

### Technical information

The technical information in this document for the AK6 diamond project (Karowe Mine) in Botswana is based on the following technical reports, respectively: NI 43-101 Technical Report on the Feasibility Study for the AK6 Kimberlite Project, Botswana Prepared by MSA Geoservices (Pty) Ltd on behalf of Lucara Diamond Corp., dated December 31, 2010; Updated NI43-101 report released on February 4, 2014, based on update Mineral Resource Estimate released by Lucara Diamond Corp., dated December 19, 2013; NI 41-101 Technical Report on the Preliminary Economic Assessment of the Karowe Diamond Mine Underground Project, Botswana Prepared by Royal Haskoning DHV on behalf of Lucara Diamond Corp., dated November 27, 2017; NI 43-101 Technical Report for the Karowe Mine: Updated Mineral Resource Update prepared by Mineral Services on behalf of Lucara Diamond Corp., dated August 9, 2018.

The authors of these technical reports are independent of the Company and are qualified persons for the purposes of National Instrument 43-101 – Standards of Disclosure for Mineral Projects ("NI 43-101"). The technical reports are available for review on SEDAR at [www.sedar.com](http://www.sedar.com).

All currencies mentioned in this presentation are in United States Dollars ("US\$") unless otherwise mentioned.

Back cover images (top to bottom): Mokubilo community farm (top); Truck transporting overburden out of the mine pit (middle); Karowe worker welding (bottom)



**LUCARA**  
DIAMOND

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