



Cerro Quema Project, Panama

### Why it Matters to Orla

Reducing greenhouse gas (GHG) emissions and adapting to human-caused climate change are among the most urgent and challenging priorities of our lifetime. The widespread negative effects of a changing climate are now playing out around the world. Longer term, the modelled outcomes of climate change have been well documented by the UN Intergovernmental Panel on Climate Change (IPCC), and range from rising sea levels and increased frequency of extreme weather-related events to loss of wildlife and plant species, to name just a few.

At both the global and local levels, enormous work and collaboration are required to reduce adverse effects on nature and people, and safeguard a liveable, sustainable future. All sectors of the economy, including mining, must step up to support the transition to net zero emissions by 2050. Gold mining is a major industrial activity with the potential to cause significant greenhouse gas (GHG) emissions, including carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), and nitrous oxide (N<sub>2</sub>O). As a responsible mining company, we understand that Orla must take effective climate action to minimize or manage our impacts and risks.

## 5.1

# Climate Change

## Our Approach: Building an Adaptation Pathway

Orla is committed to being part of the climate solution, which is essential to our purpose of creating net-positive benefits for our stakeholders. We support the global climate goal of limiting the Earth's temperature increase to 1.5° C by 2100 relative to pre-industrial levels, as called for by the IPCC and the Paris Agreement. As a newer company, we have been exposed to climate factors since inception and have built them into our decision making and operations, so that we limit our GHG footprint. We recognize that no company or geography is immune to the extreme weather impacts and believe that regulatory changes in response to climate change will not have an adverse effect on the Company's business, financial planning, strategy, and operational results.

### Governance

Climate-related initiatives, policies, and strategies are reviewed and approved by our Environmental, Sustainability, Health and Safety (ESHS) Committee. This Board-level committee ensures Orla's response to climate change is meaningful, supported with adequate resources, and in line with stakeholder expectations. Company performance, plans, and initiatives are reported by management to the Board of Directors monthly, with an in-person meeting on a quarterly basis.

Orla is committed to being part of the climate solution.



## Strategy

Our strategy related to climate action is in its infancy. We are focused on minimizing energy consumption and associated GHG emissions as much as possible, while working to identify climate-related risks and opportunities and establish plans to address them.

While we continue to build our climate action strategy, we have had success in reducing potential GHG emissions associated with our first mine in production, Camino Rojo. We accelerated powerline construction, which eliminated diesel power generation during the first year of operation, and sourced equipment with Tier 4 engine designs, which optimize fuel consumption through automated optimization and adjustable engine idle shutdown (conserving fuel when the trucks are parked or idled).

We believe that combatting climate change also presents opportunities for Orla. Businesses that can reduce or negate their carbon footprint may attract increased investment as investors seek to decarbonize their portfolios. Other benefits may include reduced exposure to taxes and other measures adopted by governments to decarbonize the economy.

As part of our climate effort, we are committed to being transparent about our performance, including through this report and future reporting. In 2023, we plan to publish expanded climate disclosures in line with the framework recommended by the Taskforce on Climate-related Financial Disclosures (TCFD).

## Climate-Related Risk Management

Climate-related risks are captured through our Enterprise Risk Management process and fall primarily into two types: physical risks and transition risks.

### Physical Risks

Physical risks are those that can cause disruption or damage to operations and assets. These risks can be acute (e.g., extreme weather events) or chronic (e.g., changing climate trends) and can lead to significant financial losses if not managed effectively. Physical risks include:

- Increasing storm frequency and intense rainfall.
- Increasing severity and duration of drought or dry-seasons.
- Increasing forest fire risk impacting linear structures such as power lines.

Orla has performed a risk assessment of infrastructure within our geographical locations using Mitiga Solutions models, which use climate intelligence and science-based analysis to allow us to evaluate our exposure under current IPCC scenarios (please find more details in the study case below). Our findings indicate that under the current Life of Mine scenarios (approximately 10 years), the physical risks due to climate change will not significantly impact our site.



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## Building a Climate Change Strategy

**Optimizing**  
energy consumption



**Identifying**  
climate-related  
risks and opportunities



**Disclosing**  
consistently over time

### Transition Risks

Transition risks are those that occur as a result of the global transition to a low- or zero-carbon economy, as countries and organizations adopt strategies, policies, laws, and tax schemes to address climate change. These risks include:

- Changed land-use policies or water conservation practices.
- The costs industry faces in implementing low-carbon technologies.
- Taxes imposed on companies by country-level tax schemes.
- The requirements of additional regulation and reporting.
- Divestment due to perception or reputation of business.

While these risks are becoming better understood, there is a lot of uncertainty in modelling local variations in climate and in the actions that governments or civil society will take, which poses its own risks for a reporting company. Orla's focus on energy efficiency and decarbonization over time is the best mitigation against any transition-related risk. Under the law in Zacatecas, Mexico, our Camino Rojo operation pays a carbon tax of \$12.42 per tCO<sub>2e</sub> - for scope 1 emissions, which equated to approximately \$164,400 paid in 2022.



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### Metrics and Targets

We are at the beginning of Orla's journey when it comes to reporting metrics and setting targets. As commercial production started at our first site in April 2022, we have not obtained a full operational year data set to establish a baseline year for our Scope 1 emissions (directly as a result of Orla's activities) or Scope 2 emissions (as a result of purchased power and emitted at the generating facility). With this in mind, and in the interests of transparency, we have separated our performance into two categories: the construction period (covering 2021) and the commissioning /operational period (from January to December 2022).

We will establish a baseline year for comparison with future performance. As we mature our processes for identifying carbon reduction projects, as well as capturing and reporting data, we will set annual targets and report progress annually. We will also develop an associated road map that will show how we expect to achieve carbon emission efficiency over time. Our progress will be described in future reports.

At this time, we track Scope 1 and 2 emissions but not Scope 3 emissions (emissions from assets or activities not controlled by Orla, including worker commuting, waste disposal and purchased goods and services). We plan to measure and report Scope 3 emissions starting in 2024.

### 2022 Highlights

**0.19 tCO<sub>2eq</sub>/oz Au**  
carbon emissions per ounce of gold produced

**13,239 tCO<sub>2e</sub>**  
total Scope 1 GHG emissions

**7,844 tCO<sub>2e</sub>**  
total Scope 2 GHG emissions





Emissions



- Scope 1 **62.8%**
- Scope 2 **37.2%**



- Diesel Heavy Equipment **57.2%**
- Grid Electricity **37.6%**
- Diesel Light **0.9%**
- Gasoline Vehicles **2.2%**
- Liquefied petroleum gas (LPG) **0.3%**
- Explosives **1.7%**

## 2022 Highlights

- Our Scope 1 emissions totalled 3,439 tCO<sub>2</sub>e in 2021 (during construction) and 13,239 tCO<sub>2</sub>e in 2022 (commissioning and operations). The additional emissions resulted from increased hauling of ore and waste as we started mining production. In 2022, the main contributor to our emissions profile was diesel use (92% of Scope 1 emissions and 57% of combined Scope 1 and 2 emissions). Our Scope 1 emissions inventory included emissions resulting from diesel and petroleum usage from mobile and stationary equipment, Liquid Petroleum Gas (LPG), and explosives.
- Scope 2 emissions increased almost 10-fold, from 897 tCO<sub>2</sub>e in 2021 to 7,844 tCO<sub>2</sub>e in 2022. Again, this is mainly due to commencing processing at Camino Rojo, which used electricity for pumping large volumes of solution onto the leach pad and through the processing plant in a continuous loop. To avoid using diesel generators on site to start-up the operation, we invested approximately \$4.3 million to connect the mine to the national power grid earlier than originally planned, which prevented the associated carbon emissions.
- In 2022, Orla's carbon emissions per ounce of gold produced was 0.19 CO<sub>2</sub>e/oz, meaning our site was efficient in terms of carbon emissions and well below the global benchmark for open pit mining operations. This result is principally due to the mine plan at Camino Rojo, which features a low strip ratio, short haul distances between the open pit and the crushing plant, as well as efficient conveyance from the crushing plant to the heap leach pad. This low intensity was also achieved because we fast-tracked power connection to the national grid. As the mine is new, carbon emissions will potentially rise over time. The distances for hauling both waste and ore will increase as pits become deeper and waste rock facilities and leach pads expand in area and height. Likewise, more pumping of solutions will require longer pumping distances. Our challenge is to identify efficiencies and alternative low-carbon energy solutions to offset these potential increased emissions.



## 2023 Focus

- Explore renewable power sources in Mexico, Nevada and Panama that can support Orla's energy transition and further reduce our carbon footprint.
- Publish climate disclosure in line with TCFD framework and incorporate climate-related risks into our Enterprise Risk Management system.
- Ensure adoption of Climate Change Policy

CASE STUDY

## Understanding climate risks, opportunities, and impacts across our operations

Our climate is changing, impacting the way we live and work. These changes will only intensify with time and create wide-reaching physical, financial, and social risks for every person and every industry, directly or indirectly. We consider that a community or an ecosystem can only be as resilient as its most vulnerable points.

To better understand and prepare for our long-term climate risks, Orla has partnered with the climate intelligence technology company, Mitiga Solutions. The company combines global and regional climate models with observational data to calculate climate hazard metrics and generate accurate future projections of hazard exposure across different emissions scenarios. Asset-level insights on physical risk are generated by merging geospatial asset data with climate hazard exposure metrics.

### Climate risk scenario analysis

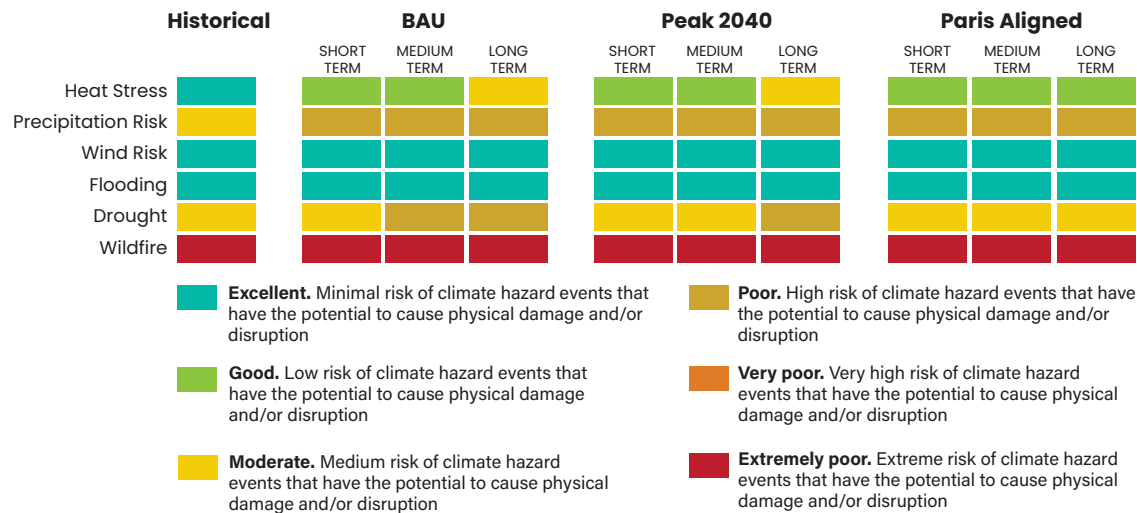
Through our collaboration with Mitiga Solutions, we used scientific and data-based scenarios to quantify future exposure of our operations and our critical supply chain to natural hazards. Following the recommendations by the International Panel of Climate Change (IPCC) and the Task Force on Climate-related Financial Disclosures (TCFD), we considered six climate hazard categories of both acute and chronic types (namely, heat stress, extreme precipitation, extreme wind, drought, wildfire, and flooding) and evaluated three possible climate emission scenarios:

- SSP5-8.5: Business as Usual (BAU) — where emissions continue to rise throughout the 21st century unabated.

- SSP2-4.5: Emissions Peak in 2040 — where emissions do not increase beyond 2040.
- SSP1-2.6: Paris-aligned Scenario — where emissions are compatible with the objectives of the Paris Agreement.

The results of our study are mapped on the diagram below, with risks categorized from minimal risks to extreme risk. As shown, wildfire, drought and precipitation risks are the top concerns in the regions relevant to Orla’s operational mine and advanced exploration projects. Historically, those three risks were considered most material to mining companies, and, based on the forecasts, will continue to be the most relevant, with a projected increase in risk level under the “Business as Usual” and “Emissions Peak in 2040” scenarios.

Orla’s Average Exposure to Physical Climate Change Risks Under Future Scenarios



**Excellent.** Minimal risk of climate hazard events that have the potential to cause physical damage and/or disruption

**Good.** Low risk of climate hazard events that have the potential to cause physical damage and/or disruption

**Moderate.** Medium risk of climate hazard events that have the potential to cause physical damage and/or disruption

**Poor.** High risk of climate hazard events that have the potential to cause physical damage and/or disruption

**Very poor.** Very high risk of climate hazard events that have the potential to cause physical damage and/or disruption

**Extremely poor.** Extreme risk of climate hazard events that have the potential to cause physical damage and/or disruption

Risks rated Moderate to Extremely Poor can be considered material risks based on Mitiga Solutions’ models

### Using Insights to Drive Action

As a result of this scenario analysis, we will incorporate the level of risk, its potential material impact and the probability of future events in our Enterprise Risk Management system. In addition, we will reinforce our current mitigation plans and future capital allocation across our operations so that we protect our people, communities and ecosystems where we operate. We also will share the findings with our key community stakeholders to support their climate-related planning and risk mitigation measures (e.g., designing and building resilient public infrastructure).

In 2023, we will continue and expand our collaboration with Mitiga Solutions to gather additional data and insights that we can integrate into our business strategies as well as our community impact investments.