

# EnviroGold Global Announces US\$ 350M in net, After-Tax Cash Flows, 66% After-Tax IRR for its Hellyer Tailings Reprocessing Project

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TORONTO, Oct. 12, 2022 - [EnviroGold Global Ltd.](#) (CSE: NVRO | OTCQB: ESGLF | FSE: YGK) ("EnviroGold Global" or the "Company"), a clean technology innovator transforming the world's overabundance of waste into responsibly produced precious metals and critical materials, is pleased to announce the positive results of an economic assessment on the Hellyer Tailings Project (the "Project") in Tasmania, Australia. A National Instrument 43-101 ("NI 43-101") Technical Report reporting the Hellyer Mineral Resource Estimate and economic assessment results will be filed within 45 days on the Company's SEDAR profile.

"This is an exciting validation of the potential economic value of our project at Hellyer, and the wider applicability of our technology to drive enhanced resource recoveries. We will be able to further refine our scientific and technical parameters as we progress to construction and metal production," said EnviroGold Global CEO, Dr. Mark Thorpe. "We look forward to replicating these results at other project sites in the near future."

## Highlights

- 9 Million Tonnes of total tailings feed
- 965,000 ounces Au Equivalent (oz AuEq) of gold, silver, copper, zinc
- After - Tax Net Present Value (NPV) discounted at 10% of US\$ 175 Million
- After - Tax Internal Rate of Return (IRR) of 66%
- After - Tax net cash flows of US\$ 350 million over 8-year operating life
- All-in Sustaining Cost US\$ 1,127 per oz AuEq, ~US\$ 100/oz less than the industry average

## Hellyer Tailings Resource

The estimated total available tailings feed for the Project is about 5.49 Mt of Type 1 tailings, and 3.73 Mt of Type 2 tailings for a total NI 43-101 inferred resource of ~9 Mt (See table). The Mineral Resource estimate is reported in accordance with NI 43-101 Guidelines for current Type 1 and Type 2 tailings and has an effective date of April 30, 2022.

While the resource is presently being reported as an inferred resource for the purposes of this economic study, it is important to note that the Hellyer Tailings Resource has been extensively studied, has been the subject of multiple JORC resource reports (most recently in 2020), each of which included measured, indicated & inferred resources. The Company's management is confident that the substantial body of work completed on the Hellyer Tailings will facilitate a near-term resource upgrade.

- Type 1: tailings already processed by the HGM tailings operation and placed in the current HGM tailings storage facility available for NVRO to recovery at the end of the HGM project life
- Type 2: tailings that are available for processing and can reasonably be expected to be processed by HGM and will be available during the first 5 years of the Project.
- NVRO's proposed operations at Hellyer will be undertaken using tailings material from two distinct operations:
- Zinc scavenger tailings recovered from the TSFs (Type 1 inferred mineral resource) - following the closure of the HGM reprocessing operation, NVRO will likely perform its own tailings recovery work (either directly or through a contract) via its own dredging operation (or other recovery method, such as hydro-mining).

- Zinc scavenger tailings direct feed from HGM's Plant (Type 2 inferred mineral resource) - the Project will use a reprocessing plant tailings line to the NVRO Plant fed from the ongoing HGM Mill operations as the source of ZST feed material. This source of tailings will be used until HGM completes its tailings extraction and milling operations (estimated to be in operation for the next four to six years).

*Table: Total Inferred Mineral Resource Estimate for the EnviroGold Global Hellyer Tailings Project (Type 1 and Type 2).*

Resource Category	Tonnage (Mt)	Au g/t	Ag g/t	Pb %	Zn %	Cu %
Type 1 Tailings						
end November 2021	3.29	2.30	59	1.45	1.04	0.19
End August 2023*	2.20	2.30	59	1.45	1.04	0.19
Total Inferred Type 1	5.49	2.30	59	1.45	1.04	0.19
Type 2 Tailings						
Estimated to end November 2021	6.04	2.30	59	1.45	1.04	0.19
Less Actual + Forecast to End August 2023*	2.31	2.30	59	1.45	1.04	0.19
Total Inferred Type 2 Tailings	3.73	2.30	59	1.45	1.04	0.19
Total Tailings Inferred Resource (Type 1 and Type 2)	9.22	2.30	59	1.45	1.04	0.19

*\*Expected grades following HGM processing*

The homogenised nature of the tailings deposit and the likely mining style (dredging or hydro-mining) largely precludes the ability to apply any cut-off grade which may, in the future, be determined based on project economics. Accordingly, no cut-off grade is used and the stated resource essentially represents the complete tailings accumulation at the reported effective date.

Determining reasonable prospects for eventual economic extraction incorporated the estimated cost for reclaiming, transporting, and processing the reprocessed HGM tailings stream in the NVRO process plant, which is estimated to be approximately US\$80 per tonne. Assuming a gold price of US\$1,650/oz and a projected gold recovery of 85%, then the break-even cut-off for the mineralization is estimated at 1.51 g/t Au. The tailings mineralization averages a grade of 2.3 g/t Au and is significantly more than the indicative break-even grade as this calculation does not consider the silver and the base metals.

Mineral resources that are not mineral reserves do not have demonstrated economic viability. The QP's are not aware of any known legal, political, environmental, or other risks that could materially affect the potential development of the mineral resources.

#### Mining and Recovery Methods

The initial stages of EnviroGold Global's NVRO Operations at Hellyer would use a reprocessing plant tailings line from the ongoing Hellyer Gold Mines Pty Ltd. (HGM) processing plant as the source of ZST feed material. This would continue for the period until HGM completes the extraction and milling operations (estimated to be in operation for the next four to six years). Hence, during this period, NVRO operations would not be undertaking any "mining" operations.

During its second operational Phase NVRO would likely perform its own, or sub-contract, tailings recovery work via its own dredging operation (or other recovery method, such as hydro-mining). The current plan during this second phase of NVRO operations would be to acquire (either directly or via a lease) the current HGM dredging, materials handling, and processing plant equipment. For these operations, the existing costs for the HGM operation would be incorporated into the overall costs of the Project.

EnviroGold Global would operate a hydrometallurgical process at Hellyer to re-process tailings from former and current Pb/Zn flotation operations. The initial stages of reprocessing would target the current HGM operations' ZST as feed to the hydrometallurgical processing plant. The NVRO operations at Hellyer would be undertaken in two stages. The first stage operation would be designed to treat 500 tonnes per day (tpd),

with the second stage expansion designed to treat 3,500 tpd, at a nominal throughput rate of 156 tph (dry) and 93.5% availability. The same flowsheet has been used for stage 1, and the stage 2 expansion.

## Capital and Operating Costs, and Project Economics

Anticipated total capital cost expenditures (CAPEX) of US\$ 92M consist of the initial capital development which includes all costs to develop the property to production, tailings reclamation and processing rate of approximately 500 tpd during Stage 1 and 3,500 tpd for Stage 2. The capital cost estimate was compiled using a combination of database costs from projects developed in Australia and South Africa, scaling factors, and factoring.

Anticipated total operating cost (OPEX) of approximately US\$80 per tonne is exclusive of mining and based on combination of metallurgical test work results, experiential judgment, reference to other operating projects with similar processing equipment, and factors as appropriate with a PEA level of study.

The Hellyer Tailings Reprocessing Project is estimated to generate after-tax net cash flows of approximately US\$350 million over the anticipated 8-year operating life of the project (LOM). Total expected capital investment of US\$92 million (including FEED of US\$1 million) will yield an internal rate of return of 66% (after-tax) and annual EBITDA contribution of approximately US\$77 million when producing at the 3,500 tpd throughput rate. The net present value (NPV) at 10% of the unlevered (no debt, all equity) cash flows is US\$175 million. Based on the current mineral resource estimate (Inferred Resource) for the Project, a total of 965,000 AuEq ounces of gold, silver, copper and zinc would be produced at an all-in sustaining cost (AISC) US\$1,127 per ounce.

## Background

EnviroGold Global's Hellyer Tailings Reprocessing Project began in August 2020 when Hellyer Gold Mines Pty Ltd ("HGM") engaged the Company to assess the feasibility of recovering precious metals (gold, silver), clean energy, and battery metals (copper, lead, zinc) from the mine tailings located within HGM's permitted tailings storage facility.

The Hellyer Tailings were produced from a volcanogenic massive sulfide ("VMS") deposit with a complex mineralogical matrix that is resistant to conventional metal recovery techniques. Significant quantities of gold, silver and other critical and strategic metals were discharged into the tailings storage facility over the course of the primary and secondary processing activities. Extensive petrological investigation, including mineral liberation analysis ("MLA") scans and laser ablation studies of the refractory tailings samples containing up to 55% of pyrite and arsenopyrite, indicated that the occluded gold is sub-microscopic and is locked within the crystal structure of the sulphide minerals. EnviroGold Global's proprietary extraction process involves sulphide dissolution followed by agitated leaching of the remaining insoluble residue, resulting in significantly enhanced metal recoveries from difficult, complex feeds.

## Other Information

The PEA and Mineral Resource Estimate have been prepared by independent Qualified Persons (QP) Jacques Houle, P. Eng., Rodrigo Carneiro, Engineer & MSc, and Dr. Rossen Halatchev, Engineer, MSc, PhD, in accordance with the requirements set forth in the CIM Definition Standards on Mineral Resources and Mineral Reserves (May 2014) and NI 43-101 standards and guidelines.

While capital and operational costs are preliminary and subject to variation, the Technical Report is a major milestone on the path to plant construction and metal production at the Hellyer site. It also discloses critical scientific and technical details of the resources contained in the Hellyer Tailings and the Company's approach to enhance metal recoveries.

*This PEA is preliminary in nature and includes Inferred Mineral Resources that are considered too speculative geologically to have the economic considerations applied to them that would enable them to be categorized as Mineral Reserves, and there is no certainty that the PEA will be realized.*

## Qualified Person Statement

All scientific and technical information contained in this news release was reviewed and approved by Ian Hodgkinson, MAIG RPGeo, Chief Geologist of EnviroGold Global, who is a Qualified Person as defined in NI 43-101.

## About EnviroGold Global

EnviroGold Global (CSE: NVRO) (OTCQB: ESGLF) (FSE: YGK), is a CleanTech company dedicated to creating shareholder value while establishing ESG & circular economy leadership by profitably reprocessing & remediating mine waste (tailings) to recover precious, critical & strategic metals - including gold, silver, copper & nickel. Led by CEO Dr. Mark Thorpe, the Company is strategically positioned to earn and maintain social license while capitalizing the estimated US\$ 3.4 trillion of in situ metal value in global tailings. Dr. Thorpe is also the Chairman of the Canadian Mining Innovation Council.

The Company's commercial strategy involves identifying, qualifying and developing tailings reprocessing opportunities, generally targeting tailings sites with at least 6M metric tonnes of tailings and gross recoverable metal value of \$124/tonne of tailings. The Company's identified potential tailings targets exceed US\$10 billion in gross recoverable metal value.

EnviroGold Global acquires the metal recovery rights to tailings sites by leveraging a profit share business model to create an attractive value proposition for site owners. The Company's business model is designed to generate high free-cash flow & high target IRR while eliminating the risks of traditional exploration and extraction. The Company expects to produce metals with a carbon footprint up to 96% lower than conventional metal producers while reducing the environmental footprint of legacy mining.

As of January 2022, the Company has eight major projects in its global project pipeline including two major projects under definitive contracts and six additional major projects at various stages of commercial negotiation and detailed technical/economic review.

The Company expects to commence production of precious metals (gold and silver), clean energy metals and battery metals (copper, lead, zinc) at its Australia project in 2023.

## Further Information

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## Forward Looking Statements

*This news release contains "forward-looking statements" within the meaning of applicable securities laws, including, without limitation, earnings guidance, economic guidance, operational guidance and future capital spending amounts. All statements contained herein that are not clearly historical in nature may constitute forward-looking statements.*

*Graphical representations included in this news release are approximate representations which may vary from defined regulatory boundaries.*

*Generally, such forward-looking information or forward-looking statements can be identified by the use of forward-looking terminology such as "plans", "expects" or "does not expect", "is expected", "budget", "scheduled", "estimates", "forecasts", "intends", "anticipates" or "does not anticipate", or "believes", or variations of such words and phrases or may contain statements that certain actions, events or results "may", "could", "would", "might" or "will be taken", "will continue", "will occur" or "will be achieved". The forward-looking information and forward-looking statements contained herein include, but are not limited to, statements regarding the expected terms of the Hellyer Tailings Reprocessing Project and its completion, the Company's working relationship with the owner(s) of the Hellyer Tailings, the economic viability of the Hellyer Tailings Reprocessing Project and statements regarding any residual precious metals as a by-product of the remediation, the Company's expansion of its reprocessing pipeline, and the Company's ability to accelerate the world's transition to a circular resource economy. Forward-looking information in this news release are based on certain assumptions and expected future events, namely: the Company's ability to continue as a going concern; the continued commercial viability and growth in the clean technology and mining waste reprocessing industry; continued approval of the Company's activities by the relevant governmental and/or regulatory authorities; the continued development of clean technology and mining waste reprocessing technology; and the continued growth of the Company. These statements involve known and unknown risks, uncertainties and other factors, which may cause actual results, performance or achievements to differ materially from those expressed or implied by such statements, including but not limited to: the potential inability of the Company to continue as a going concern; the Company's inability to accelerate the world's transition to a circular resource economy, the risks associated with assessing metallurgical recovery rates from mine tailings and waste and related volumetric assessments, the risks associated with the mining and mining waste recycling industry in general; increased competition in the clean technology and waste reprocessing market; the potential unviability of the clean technology and mining waste reprocessing market; incorrect assessment of the value and potential benefits of various transactions; risks associated with potential governmental and/or regulatory action with respect to clean technology and mining waste reprocessing; risks associated with a potential collapse in the value of clean technology and waste reprocessing; and risks relating to the Company's potential inability to expand its reprocessing pipeline.*

*Readers are cautioned that the foregoing list is not exhaustive. Readers are further cautioned not to place undue reliance on forward-looking statements, as there can be no assurance that the plans, intentions or expectations upon which they are placed will occur. Such information, although considered reasonable by management at the time of preparation, may prove to be incorrect and actual results may differ materially from those anticipated. Forward-looking statements contained in this news release are expressly qualified by this cautionary statement and reflect the Company's expectations as of the date hereof and are subject to change thereafter. The Company undertakes no obligation to update or revise any forward-looking statements, whether as a result of new information, estimates or opinions, future events or results or otherwise or to explain any material difference between subsequent actual events and such forward-looking information, except as required by applicable law.*

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