

₩SLR

Independent Statement of Assurance of Weir Group PLC's Avoided Emissions results

ISAE 3000 (2020) Statement

The Weir Group PLC

10th Floor, 1 West Regent Street, Glasgow, Scotland, G2 1RW

Prepared by:

SLR Consulting Limited

The Cursitor, 38 Chancery Lane, London, WC2A 1EN

SLR Project No.: 425.064876.00001 Client Reference No: CC.000295

24 November 2023

Revision: 01

Making Sustainability Happen

Basis of Report

This is a report by SLR Consulting Limited (SLR) for the Group Head of Sustainability of The Weir Group PLC.

This document has been prepared by SLR Consulting Limited (SLR) with reasonable skill, care and diligence, and taking account of the timescales and resources devoted to it by agreement with The Weir Group PLC (the Client) as part or all of the services it has been appointed by the Client to carry out. It is subject to the terms and conditions of that appointment.

SLR shall not be liable for the use of or reliance on any information, advice, recommendations and opinions in this document for any purpose by any person other than the Client. Reliance may be granted to a third party only in the event that SLR and the third party have executed a reliance agreement or collateral warranty.

Information reported herein may be based on the interpretation of public domain data collected by SLR, and/or information supplied by the Client and/or its other advisors and associates. These data have been accepted in good faith as being accurate and valid.

The copyright and intellectual property in all drawings, reports, specifications, bills of quantities, calculations and other information set out in this report remain vested in SLR unless the terms of appointment state otherwise.

This document may contain information of a specialised and/or highly technical nature and the Client is advised to seek clarification on any elements which may be unclear to it.

Information, advice, recommendations and opinions in this document should only be relied upon in the context of the whole document and any documents referenced explicitly herein and should then only be used within the context of the appointment.

Independent Assurance of Weir Group's Avoided Emissions results: ISAE 3000 (2020) statement

The Nature of the Assurance

This is a report by SLR Consulting Limited (SLR) for the Group Head of Sustainability of The Weir Group PLC (Weir).

SLR has undertaken limited assurance of avoided emissions assessment results comparing GHG emissions resulting from four different mining circuit configurations. These four assessments evaluate three optimised technology combinations against a conventional comminution circuit design for a mine processing 15 million tonnes of copper ore per year. Each circuit is based on a 'rock to recovery' system boundary – reducing rock direct from the mine to a size that enables the mineral to be recovered. The four configurations are:

- 1. Conventional comminution circuit based on a Semi-Autogenous Grinding (SAG) mill and ball mill.
- 2. Weir High Pressure Grinding Roller (HPGR) replacing the SAG mill at the initial grinding stage.
- 3. HPGR, plus vertical stirred mill (VSM) replacing the ball mill.
- 4. Addition of a coarse particle flotation (CPF) unit.

These assessments focus on the use-phase of the life-cycle only; other life-cycle phases have been excluded because previously studies have shown these to be immaterially small across all comparisons (<1% of energy and emissions impact). Assessments have been made using a "year-on-year" timeframe approach. Comparative impacts have been assessed only in terms of energy use, grinding media consumption, and associated emissions, since other environmental trade-offs were deemed immaterial for comparison. The specificity level of the claim resulting from these assessments adopts the "company-specific", medium specificity level as designated by the WBCSD Avoided Emissions Guidance.

SLR has undertaken limited assurance of these assessments against the WBCSD Avoided Emissions Guidance (March 2023), excluding pp10-11 and pp40-41, which provide guidance around communicating and reporting avoided emissions. This exclusion is because Weir has not yet publicly reported or communicated these results, in order for this to be assured. We have also verified the appropriate GHG conversion factors used in converting energy into emissions for the resulting avoided emissions claim.

The Weir Group PLC is entirely and solely responsible for the production and publication of the data assured, SLR for its assurance.

This engagement was performed in accordance with the International Standard on Assurance Engagement (ISAE) 3000 (Assurance Engagements other than Audits or Reviews of Historical Financial Information), and the relevant subject-matter specific ISAE for GHG data (ISAE 3410, Assurance Engagements on Greenhouse Gas Statements).

GHG quantification is subject to inherent uncertainty due to factors such as incomplete scientific knowledge about the global warming potential of different GHGs and uncertainty around the models and parameters used in estimating GHG emissions.

SLR has complied with the requirements for independence, professional ethics and quality control as stipulated by ISAE 3000 (2020) Requirement 3a and 3b.

Assurance work performed

The assurance work was commissioned in October 2023 and was completed on 24th November 2023. Detailed records were kept of meetings and correspondence relating to the assurance. A team of five, led by a Director, undertook the assurance and commentary process. A second Director, who is an assurance specialist, acted as adviser to the group.

The assurance engagement was undertaken to a **limited** level, and involved the following activities with regard to the avoided emission assessment results:

- 1. Reviewed the expanded comminution flowsheet studies through an LCA lens.
- 2. Reviewed LCA approach for the archetype and counterfactual circuits.
- 3. A review of GHG calculations, emission factors for accuracy and consistency with Avoided Emissions guidelines for the archetype and counterfactual circuits.
- 4. Reviewed calculations and methodology against the WBCSD Avoided Emissions Guidance.
- 5. Carried out spot checks on data.
- 6. Considered regional variations in emissions factors and the effects on results.
- 7. Undertook calls to resolve any remaining queries regarding decisions, evidence or calculations.
- 8. Retained full record of transactions with data owners.

Independence

SLR Consulting Ltd has worked with The Weir Group PLC on sustainability topics since 2020. This is the first year that we have provided limited assurance for avoided emissions assessment. Between 2021 – H1 2023, SLR advised Weir by reviewing available best practice guidance around avoided emissions accounting and reviewing Weir's previous avoided emissions calculations on two products (the MCR550 pump and HPGR). This previous advisory work around avoided emissions was undertaken before the WBCSD Avoided Emissions Guidance was published and did not result in undertaking any formal limited assurance.

During the 2023 reporting period, our work with Weir focused on:

- Data assurance for avoided emissions calculations
- Assurance for scope 1 and 2 emissions, and
- Support for calculation of scope 3 emissions.

Conclusion

Based on the scope of work and assurance procedures performed, nothing has come to our attention that causes us to believe that the avoided emissions assessment results for the four different mining circuit configurations presented in Appendix A are not prepared, in all material respects, in accordance with the WBCSD Avoided Emissions Guidance (2023) (excluding pp10-11 and pp40-41).

SLR Consulting Limited

London 24th November 2023

Appendix A Avoided Emissions assessment results

Independent Statement of Assurance of Weir Group PLC's Avoided Emissions results

ISAE 3000 (2020) Statement

The Weir Group PLC PLC

SLR Project No.: 425.064876.00001

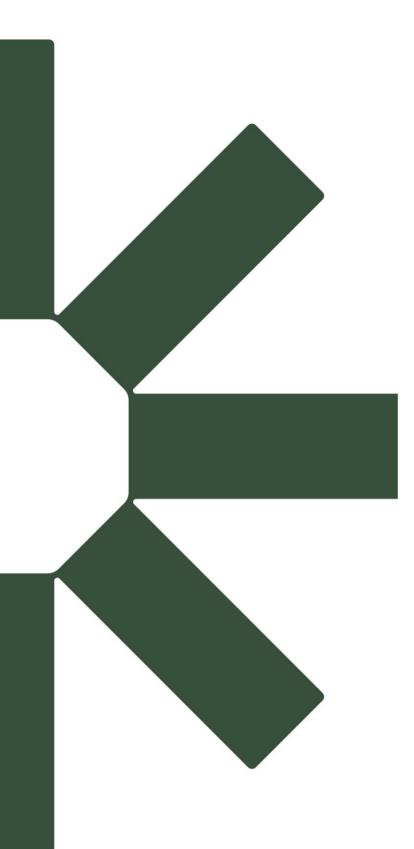
24 November 2023

Consumed energy, grinding media and emissions per circuit			
Circuit	Energy Consumption per Year (MWh)	Grinding Media Consumption per Year (t)	Total carbon emissions (tCO₂e)
SABC circuit	345,480	13,170	175,060
2C HPGR BM	243,354	6,780	117,618
2C HPGR VSM	213,229	1,062	91,934
2C HPGR VSM and CPF	198,171	911	85,269
Emission factors (*)	419.8kgCO2e/MWh	2.28tCO2e/t	
Avoided energy, grinding media and emissions from baseline SABC circuit			
Circuit	Energy Consumption per Year (MWh)	Grinding Media Consumption per Year (t)	Total carbon emissions (tCO₂e)
2C HPGR BM	102,126	6,390	57,442
2C HPGR VSM	132,251	12,108	83,126
2C HPGR VSM and CPF	147,309	12,259	89,791
(*) The energy emission factor applied is from the International Energy Agency (IEA, 2022) for Chile's grid			

*) The energy emission factor applied is from the International Energy Agency (IEA, 2022) for Chile's grid electricity in 2020. The calculations assume that the mining circuits are powered by grid electricity. Chile was chosen because more copper is mined there (27%) than any other single country. Whilst the energy and grinding media values will not change, situating the configuration in other regions or in other years may have a significant effect on the associated carbon emissions.
The emission factor for the grinding media is a relatively conservative value found in a couple of publicly.

The emission factor for the grinding media is a relatively conservative value, found in a couple of publicly available reports cited by Weir.

https://www.sciencedirect.com/science/article/pii/S0892687522000413 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8124319/



Making Sustainability Happen