AngloAmerican

Anglo American FY2020 Scope 3 Methodology

Technical report

FOR EXTERNAL USE

27 OCTOBER 2021

Contents

1. Introduction

1.1 Context

Anglo American has devised its Sustainable Mining Plan which details strategic pillars and connected areas of innovation and action that guide how the company approaches sustainability, including climate change as a central facet. Anglo American considers climate change a critical issue and recognises its responsibility and ability to contribute to the solution; managing the challenge as material to its business and engaging actively with its stakeholders to meet their growing expectations.

Anglo American is a member of the International Council on Mining and Metals (ICMM), is a signatory to the ICMM *statement on climate change* issued by the ICMM and has a Group Climate Change Policy as of 2020.

Anglo American publishes an Annual Report accompanied by a Sustainability Report that communicates strategy, commitments, actions, performance, and progress in terms of material matters and an array of environmental, social, and governance (ESG) metrics and targets, including carbon performance and climate change risk and opportunity governance and management aspects.

Furthermore, to entrench Anglo American's commitment to managing material risks and opportunities and sustainable practices, Anglo American has endorsed and integrated the Recommendations of the Taskforce for Climate-related Financial Disclosures (TCFD). Through our Annual Report, Sustainability Report, complemented by our periodic climate change progress updates and the 2021 Climate Change Report, we are disclosing the key aspects of the TCFD Recommendations. Anglo American also responds annually to the CDP Climate Change Questionnaire.

In 2021, Anglo American completed the demerger of its South African Thermal Coal operations, now called Thungela Resources, and announced the agreement to sell its shareholding in the Cerrejón mine in Colombia, which marks the removal of Thermal Coal operations from the Anglo Group portfolio[1]. The results of these changes, as well as further considerations and advancements in carbon accounting methodology, have informed the FY2020 Scope 3 results reported here as our base year. Anglo American continues to consider the opportunities to tilt towards future-enabling products, while continuing to drive for business value, and pushing ourselves and our partners to improve performance.

1.2 Our 2020 improvements to our Scope 3 accounting

Anglo American has measured, verified and reported on the organisation's Scope 1 and Scope 2 emissions for many years now, and have implemented leading projects for operational productivity and efficiencies, to achieve significant GHG emissions reductions. The organisation has set stretch goals (including a 30% absolute GHG decrease by 2030) and has committed to becoming Carbon Neutral on its Scope 1 & 2 emissions by 2040.

Considering the commodities in Anglo American's portfolio, the present carbon intensity of value-adding, bulk transportation, and manufacturing processes downstream of Anglo American's operations, and the global nature of Anglo American's value chain, the organisation's Scope 3 was anticipated to be significantly higher than its Scope 1 and Scope 2 emissions, and to be highly concentrated in select activities.

In early 2020, Anglo American plc finalised the first group-wide Scope 3 emissions assessment, covering the 2018 financial year, which was the subject of our first Anglo American FY2018 Scope 3 Methodology Report published on our website. Since then, we have been working to substantially enhance our data management, carbon accounting methods and reporting processes, identify areas where technology may have a significant impact, and develop opportunities for meaningful collaboration in parts of our value chain. While our efforts are presently focused on the areas of most material value chain emissions, strategic and impactful decarbonisation options are being investigated more broadly.

[1] Anglo American marketing and trading activity of thermal coal from the Thungela Resources assets will continue until 2024.

With this FY2020 Scope 3 Methodology Report, we explain our approach, methodologies and report our performance for the period 1 January 2020 – 31 December 2020. We also highlight specific changes to our reporting approach and areas of improvement to data quality. This year, for the first time, our Scope 3 results and methodology have been subject of an independent external review, with no material findings identified and recommendations for continued enhancement have been incorporated or identified for a subsequent period.

This is part of our continued efforts to improve the accuracy and completeness of our Scope 3 reporting, as well as a necessary part of improving the resolution of emissions arising from activities in our value chain so we can be more strategic and targeted in our response.

The **FY2020 Scope 3 inventory has been selected as the base year for the Group's Scope 3 reporting,** and we have explained the measures we have taken to ensure that it is a comparable and fair base year against which to measure ourselves as we continue to target Scope 3 performance.

Anglo American worked with the Carbon Trust to undertake the FY2020 group-wide Scope 3 emissions assessment, and IBIS Consulting provided independent external review for the FY2020 Scope 3 results.

1.3 About the Methodology Report

The Group Scope 3 model accompanies and is the topic of this **Scope 3 Emissions Calculation Methodology Report concerning FY2020** (the "Methodology Report" or the "Report").

The model results provide a baseline for the organisation to target reductions in its value chains. The exercise of establishing a Scope 3 accounting and reporting framework, underpinned by the key GHG emissions reporting principles, also serves to raise internal awareness of the ambition to account for and manage this area of climate-related business risk, and to embed the reporting processes needed to do so on an on-going basis.

The Methodology Report contains the organisational and accounting boundaries, methodologies, assumptions, sources and key references applied in the preparation of the model. It also documents the results of the Scope 3 assessment according to the organisational structure adopted for this reporting purpose. This Methodology Report's Section 2 describes the detailed modelling approach adopted in the Scope 3 model.

The model development and results reporting have been undertaken in conformance with WBCSD and WRI (2011) Greenhouse Gas Protocol **Corporate Value Chain (Scope 3) Accounting and Reporting Standard Supplement to the GHG Protocol Corporate Accounting and Reporting Standard** (the GHG Protocol) as amended, and the Required Greenhouse Gases in Inventories, Accounting and Reporting Standard Amendment (2013). The additional guidance provided in the GHG Protocol Technical Guidance for Calculating Scope 3 Emissions (Scope 3 Guidance) was considered in the development of the model.

The information contained in this document refers to the FY2020 reporting period. For that period, the information disclosed in this Report meets the disclosure requirements of Global Reporting Initiative (GRI) standard GRI 305 (Disclosure 305-3 – Other indirect (Scope 3) GHG emissions).

1.4 Scope 3 accounting and reporting principles

The model development and results wherever possible have abided by the GHG Protocol principles of relevance, completeness, consistency, transparency, and accuracy. In this Methodology Report, where distinct trade-offs have been made, these are highlighted, and the rationale provided.

The agreed approach has been to favour the principles of accuracy and relevance, especially where these provide greater comparability within the industry and pertain to our strategic efforts, and therefore relevance for the users of this information. This is sometimes at the cost of completeness and consistency. However, as our efforts continue to enhance Scope 3 reporting and as systems and value chain transparency increases concerning carbon performance and action, these trade-offs are expected to continue to diminish.

Transparency has been a consideration throughout the development process and the compilation of the model and the Methodology Report.

1.5 GHG Protocol reporting requirements

This document complements the disclosure made by Anglo American in its Sustainability Report 2020, and in combination these satisfy the reporting requirements established by the GHG Protocol Section 11.1.

The GHG Protocol Section 11.2 provides further optional information which may be disclosed. The Anglo American FY2020 Scope 3 GHG Emissions model enables Anglo American to report this optional information should they be favoured. In terms of these optional reporting elements suggested by the GHG Protocol, the model and this report does not:

- Disaggregate by individual gases.
- Report emissions separately, though the equivalent emissions reported cover the gases CO_2, CH_4, N_2O, HFCs, PFCs, SF_6 and NF_3 (no other GHGs have been identified as relevant or material for Anglo American's value chain).
- Report information on GHG sequestration or removals; information on emissions avoided; intensity ratios; product performance as well as against benchmarks.
- Quantitatively assess and provide information on inventory uncertainty or report policies to improve inventory quality.
- Represent supplier/partner engagement and performance or make any comment on this.
- Report information on the company's GHG management and reduction activities, including Scope 3 reduction targets, supplier engagement strategies, product GHG reduction initiatives, etc.
- Report information regarding purchases of GHG reduction instruments, which is not known to be presently undertaken in any material respect in terms of Scope 3 emissions; similarly, reductions at sources in the inventory boundary subject to sale/transfer or offset trading with relevance to Scope 3; and information on contractual provisions addressing GHG -related risks or obligation for Scope 3 reporting. (These may be relevant for Scope 1 and Scope 2 instances but is not in coverage for this engagement.)

The demerger and divestment activities undertaken by the company in the 2021 year have already been accounted for in the FY2020 base year model and results according to the specifications of ISO 14064-1:2018 *Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*, as these activities resulted in a significant change in the organisational structure which has materially impacted on the Group's Scope 3 results.

1.5.1 External Review

The Anglo American FY2020 Scope 3 GHG Emissions model results and methodology have been independently externally reviewed by a reputable independent sustainability reporting and review provider, IBIS Consulting.

1.6 Organisational and reporting boundary

1.6.1 Organisational structure and reporting structure

Anglo American's business is managed as six operating units:

- De Beers
- Base Metals
- Platinum Group Metals
- Bulk Commodities and Other Minerals (Iron Ore, Coal, Nickel and Manganese)
- Crop Nutrients
- Marketing

For the purposes of determining Scope 3 emissions, product value chains have been identified as a meaningful approach for management and monitoring purposes. In the model, emissions have been attributed to operations, that have been categorised by the major commodity sold, namely:

- Metallurgical Coal

- Thermal Coal
- Iron Ore
- Nickel
- Copper
- Platinum Group Metals
- Diamonds
- Manganese
- Polyhalite

To a great extent, these product designations align with Business Units – a functional allocation within Anglo American . Trading activities were also recognised and allocated in the model.

In the case of Coal Australia, which produces both metallurgical coal (primarily) and thermal coal, in the prior Scope 3 reporting structure distinction was not made between the coal product being sold from these assets and all activity data was categorised as metallurgical coal. This has been amended in this 2020 Scope 3 reporting exercise so that Coal Australia metallurgical coal outputs and thermal coal outputs are calculated and recorded distinctly for better accuracy and transparency.

Anglo American's Marketing business is engaged in 3rd Party commodity trading. For ease and consistency of communication, the traded commodities have been computed and reported separately due to the distinctions made between these product volumes and the product volumes mined by Anglo American within the company and in Scope 3 accounting approaches.

Emissions arising from activities conducted by centralised offices and functions, or which are not labelled and categorised internally as belonging to a specific operation, have been attributed as "Corporate" emissions. Each business unit has an entity labelled as "Corporate" for these purposes and there is also a "Group Corporate" label to capture these functions and activities that are not attributable to any particular subsidiary business unit (e.g., Group functions).

For the Samancor Manganese operations in Australia and South Africa, due to the product volumes for each separate entity being available in the activity data sets, an equal apportionment of the total Manganese sales volumes in the period has been conducted to allocate these volumes to the Australian and South African entities – this is recommended to be enhanced with separate sales volumes for each entity in future reporting exercises.

1.6.2 Overview of consolidation approach

The Sustainability Report covers subsidiaries and joint ventures over which the Anglo American Group has management control or acts as operator. It does not include independently managed operations, such as Cerrejón, Collahuasi and Samancor, unless specifically stipulated where there have been significant incidents. It also excludes De Beers' non-managed joint operations in Namibia and Botswana from our reporting scope, unless specifically stipulated in the reporting. Anglo American defines its organisational boundary on an operational control basis, which informs its accounting and reporting of Scope 1 and Scope 2 GHG emissions, and this has been consistently applied to the Scope 3 accounting and reporting approach.

In line with this approach, all operations and assets deemed to be within operational control of Anglo American are accounted for fully and not according to the equity or financial share attributable to Anglo American in these operations or assets.

It does not include independently managed operations or non-managed JVs in its Scope 1 and 2 reporting Scope (except in specific circumstances as described in the FY2020 Sustainability Report, that does not relate to GHG emissions accounting.)

For completeness, and in line with recommendations from the GHG Protocol for material investments held by the reporting company, **this Scope 3 accounting approach includes the Scope 1, 2, and 3 emissions of non-managed investments and JVs, where material and quantifiable, on the basis of equity holdings in these investments (debt exposure or other financing arrangements not being relevant at this time).**

1.6.2.1 Specific considerations

Specific considerations for the following areas have been accounted for:

- Non-managed subsidiaries and joint ventures
- Projects and C&M
- Continuing and discontinued operations
- Trading of 3rd Party products
- Emissions associated with corporate offices

1.7 Base year

The model and the Methodology Report concerns emissions expected to arise as a result of value chain activities related to the activities undertaken by Anglo American during its Financial Year 2020, namely 1 January 2020 – 31 December 2020. (FY2020).

This is established as the Anglo American Plc Scope 3 GHG Emissions inventory base year for Scope 3.

The rationale for setting FY2020 as the base year includes:

- It is the most recent full year of data for the organisation.
- The Scope 3 results for this period have been independently externally reviewed.
- Substantial structural changes have taken place in the organisation over previous periods and are expected to take place within the next reporting period (FY2021). Whilst this organisational evolution and rationalisation is anticipated to continue in the future, FY2020 provides a view to the organisation most closely representing the present (as in 2021 when the model was developed) structures, subsidiaries and JV holdings and is reflective of a commodity mix and business trajectory for the foreseeable future.
- Whilst Anglo American has already set targets, developed plans and begun implementation of decarbonisation interventions for Scope 1 and Scope 2 (for which it has established FY2016 as base year), following the exit from Thermal Coal operations, this is expected to be re-baselined accordingly. Aligning the Scope 1 and 2 re-baseline to 2020 and this 2020 Scope 3 inventory will yield a consistent and unified base year for the company's climate reporting.

1.8 Bespoke accounting systems

Anglo American has devised an "Inventorying system" (or allocation and organisation system) for its Scope 3 accounting inventory, whereby the 'Anglo American Scope 3 Carbon Inventory' is reflective of a GHG Protocol-aligned inventory that is complete, relevant and fairly accounts the Scope 3 emissions attributable to the Group as a result of their business activities. Anglo American has decided to report an 'Additional Disclosure Scope 3 Carbon Inventory' as an additional indicator, which reports beyond the boundary required in the GHG Protocol and beyond that of its peers.

Anglo American will utilise the AA Scope 3 Carbon Inventory for target setting purposes while the Additional Disclosure Scope 3 Inventory will be used to monitor and drive disclosures by third parties in the industry and value chains, but which will not have targets set against it. The approach and results from the Anglo Scope 3 Carbon Inventory is reflected in this report.

1.9 Scope 3 reporting boundary

The GHG Protocol designates corporate Scope 3 emissions between two broad groups and fifteen categories, described in Table 2 below. These designations and definitions have been applied in the development of the model and this Methodology Report discloses in line with this framework. As reflected in each subsection, all fifteen categories have been considered in the assessment, and all categories except for Category 12 have

been calculated. The accounting approach and model conforms to the minimum Scope 3 boundary established by the GHG Protocol with specific exclusions as detailed in each section following in this report. For categories where emissions have not been calculated based on not being relevant, the rationale for this has been provided in each subsection.

Table 1: GHG Protocol Scope 3 GHG emissions designations between Upstream and Downstream emissions groups and Anglo American calculation status in FY2020 model

Scope 3 Category	Description	Calculation status in FY2020	Time boundary accounted for in Anglo American FY2020 model	Scope 3 activity boundary accounted for in Anglo American FY2020 model
Upstream emissions				
Category 1 *Purchased Goods and Services*	Extraction, production and transportation of goods and services purchased by the company in the reporting year	Not material, calculated	• Past years • Reporting year	• **Inclusion:** All upstream (cradle-to-gate) emissions of purchased goods and services in the reporting period. The emissions factors used were based on the Quantis-Suite spend-based methodology (Quantis, 2021). • **Exclusions:** Scope 1 and Scope 2 emissions of non-material goods spend and spend on services have been built-in to the model, however, the activity data (spend for the 2018 year) was not received and as such the emissions herein have not been included. It is advised that going forward this spend data be recorded and included in the model.
Category 2 *Capital Goods*	Extraction, production and transportation of capital goods purchased by the company in the reporting year	Not material, calculated	• Past years • Reporting year	• **Inclusion:** All upstream (cradle-to-gate) emissions of purchased capital goods calculated as spend on plant, property and equipment (PPE) for the reporting year. The emissions factor used is based on the Quantis-Suite spend-based methodology (Quantis, 2021). • **Exclusion:** No material exclusions.
Category 3 *Fuel and Energy-Related Activities*	Extraction, production and transportation of fuels and energy purchased by the company in the reporting year	Not material, calculated	• Past years • Reporting year	For upstream emissions of purchased fuels: • **Inclusion:** all upstream (cradle-to-gate) emissions of purchased fuels. • **Exclusion:** Due to uncertainty concerning the exact origin and logistics of bringing fuels and energy to each Anglo American site,

				the model has applied a well-to-tank emissions factor, assuming this generic proxy provides substantially complete coverage of emissions associated with this activity. We have not added a further estimation of emissions for transporting fuels and energy from this generic "tank" to each individual site. Estimates indicate doing so may add approximately 1% – 3% to this emissions category, which was deemed immaterial and exclusion not detracting from the relevance of the reported result. For upstream emissions of purchased electricity: • **Inclusion:** All upstream (cradle-to-gate) emissions of purchased fuels (from raw material extraction up to the point of, but excluding, combustion by a power generator) • For T&D losses: • **Inclusion:** All upstream (cradle-to-gate) emissions of energy consumed in a T&D system, including emissions from combustion Generation of purchased electricity that is sold to end users is not relevant to Anglo American.
Category 4 *Upstream Transportation and Distribution*[2]	Transportation and distribution of products purchased by the company between tier-1 suppliers and its own operations	Not material, calculated	• Past years • Reporting year	• **Inclusion:** The Scope 1 and Scope 2 emissions of transportation and distribution providers that occur during use of vehicles and facilities to deliver the purchased goods to the various operations. The emissions factors used were based on the Quantis-Suite spend-based methodology for road freight, warehousing, and air freight (Quantis, 2021).

[2] Distinguishing between upstream and downstream emissions with certainty for transportation and distribution of products was not possible

				• **Exclusion:** No material exclusions.
Category 5 *Waste Generated at Operations*	Disposal and treatment of waste generated by the company's operations in the reporting year	Not material, calculated	• Reporting year • Future years	• **Inclusion:** The Scope 1 and Scope 2 emissions of waste management suppliers that occur during disposal or treatment (i.e., Scope 1 and Scope 2 emissions for the various waste treatment processes, namely landfilling, incineration and recycling); as well as emissions from transportation of waste. • **Exclusion:** No material exclusions.
Category 6 *Business Travel*	Transportation of employees for business-related activities during the reporting year (in vehicles not owned by the company)	Not material, calculated	• Reporting year	• **Inclusion:** The Scope 1 and Scope 2 emissions of transportation carriers that occur during use of vehicles (specifically airline carriers(combustion), and car rentals (combustion)). Also included Scope 1 and Scope 2 emissions associated with hotel accommodation (energy consumption). • **Exclusion:** The optional life cycle emissions associated with the manufacturing of vehicles.
Category 7 *Employee commuting*	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned by the company)	Not material, calculated	• Reporting year	• **Inclusion:** The Scope 1 and Scope 2 emissions of employees and transportation providers that occur during use of vehicles; as well as well-to-tank emissions associated with the fuel used in employee commuting. • **Exclusion:** The optional emissions from employees teleworking.
Category 8 *Upstream Leased Assets*	Operation of assets leased by the company in the reporting year and not included in Scope 1 and Scope 2 emissions	Not relevant, not calculated	Not applicable	Not Applicable
Downstream emissions				
Category 9 *Downstream Transportation*	Transportation and distribution of products sold by the company in the	Not material, calculated	• Reporting year	• **Inclusion:** The Scope 1 and Scope 2 emissions of transportation and distribution providers that occur during use of vehicles and facilities to deliver the sold goods to customers globally. The

and Distribution	reporting year between the company's operations and the consumer (in vehicles not owned by the company)			emissions factors used were based on the Quantis-Suite spend-based methodology for road freight, warehousing, air freight, and rail freight for the non-shipping logistics components (Quantis, 2021). • **Exclusion:** The optional life cycle emissions associated with the manufacturing of vehicles or infrastructure have not been included in this model.
Category 10 *Processing of Sold Products*	Processing of intermediate products sold in the reporting year by downstream companies	Material, calculated (product specific considerations)	• Reporting year • Future years	• **Inclusion:** The Scope 1 and Scope 2 emissions of downstream companies that occur during processing of the sold product into an intermediate stage. • **Exclusion:** No material exclusions.
Category 11 *Use of Sold Products*	End use of goods and services sold by the company in the reporting year	Material, calculated (product specific considerations)	• Reporting year • Future years	• **Inclusion:** The direct use-phase emissions of sold products over their expected lifetime (i.e., the Scope 1 and Scope 2 emissions of end users that occur from the use of: products that directly consume energy (fuels or electricity) during use; fuels and feedstocks; and GHGs and products that contain or form GHGs that are emitted during use). • **Exclusion:** The indirect use-phase of sold products has not been included in this model due to the numerous uncertainties of the indirect uses of the sold products and the complex calculations for emissions attributed to the commodity sold (as a portion of the products mass in the indirect use-phase).
Category 12 *End-of-Life Treatment of Sold Products*	Waste disposal and treatment of products sold by the company in the reporting year	Not material, not calculated	• Reporting year • Future years	• **Inclusion:** none • **Exclusion:** In the FY2018 result, the Scope 1 and Scope 2 emissions of waste management companies that occur during disposal, recycling and treatment of sold products were included, as was landfilling activities (for which the emissions included collection, transportation and landfill emissions ('gate to grave')).

				In considering the FY2020 approach and the level of certainty that can fairly be attributed to this far downstream activity, and the current level of insight and influence, this category has not been calculated for FY2020. This is consistent with the rationale for exclusion of indirect use-phase emissions also for FY2020.
Category 13 *Downstream Leased Assets*	Operation of assets owned by the company and leased to other entities in the reporting year	Not relevant, not calculated	Not applicable	Not applicable
Category 14 *Franchises*	Operation of franchises in the reporting year not included in Scope 1 and Scope 2	Not material, calculated	• Reporting year	**Inclusion:** The Scope 1 and 2 emissions from entities that the organisation deems to be franchise entities, which include the De Beers Forevermark and De Beers Jewellers companies globally. **Exclusion:** No material exclusions.
Category 15 *Investments*	Operation of investments in the reporting year not included in Scope 1 and Scope 2	Not material, calculated	• Past years[3] • Reporting year • Future years	**Inclusion:** Proportional Scope 1, 2, and 3 emissions from equity investments that occurred in the reporting year, accounted using Anglo American's equity share as the consolidation approach. **Exclusion:** No material exclusions.

[3] Category 15 *Investments* refers to the emissions from non-managed investments and joint ventures, for which these operations' Scope 1, 2 and 3 emissions are accounted for as Anglo American Scope 3 emissions, proportionate to equity stake. The Scope 1 and 2 emissions from these investments would derive from activities in the reporting year; however, certain emissions upstream and downstream of the investment entity may occur in the preceding or subsequent years to the reporting period.

1.10 FY2020 Scope 3 summary results

Anglo American's FY2020 Scope 1, 2, and 3 emissions inventories (in the AA Scope 3 Carbon Inventory) are summarised in Table 2 and further detail is provided for each product throughout the next section.

The most significant contributions to Anglo American's Scope 3 emissions in FY2020 arise from the downstream processing of iron ore and metallurgical coal into iron and steel and subsequent use of these products in manufacturing. These emissions have been accounted for in Category 10 *Processing of Sold Products* and Category 11 *Use of Sold Products*. The significance of these emissions warrants their distinct reporting.

Table 2: ***Anglo American's FY2020 Scope 1, 2 and 3 GHG footprint, with Scope 3 by Category***

Anglo American Scope 1, 2, and 3 emissions (Scope 3 by Category and major constituent)	FY2020 Scope 3 GHG emissions ($MtCO_2e$) (excluding biogenic emissions[4])	% of total Scope 1, 2, and 3 emissions (%)[5]
Scope 3 Upstream emissions		
Category 1 *Purchased goods and services*	7.01	5.4%
Category 2 *Capital goods*	6.98	5.4%
Category 3 *Fuel and energy-related activities*	1.34	1.0%
Category 4 *Upstream transportation and distribution*	0.13	0.1%
Category 5 *Waste generated at operations*	0.10	0.1%
Category 6 *Business travel*	0.01	~0.0%
Category 7 *Employee commuting*	0.42	~0.0%
Category 8 *Upstream leased assets*	0	0.0%
Scope 3 Downstream emissions		
Category 9 *Downstream transportation and distribution*	2.40	1.8%
Category 10 *Processing of sold products*	58.04	44.6%
Crude Steel making	56.10	43.2%

[4] Biogenic emissions originate in only selected instances with certainty in Anglo American's value chain, specifically in the consumption of biodiesel in transport in Brazil which impacts Category 7 *Employee Commuting*. The Scope 3 contribution of biogenic emissions is considered nominal and is reported only in the model and not in this Methodology Report, for succinctness.

[5] These computations apply Scope 1 and 2 results of 9.6 $MtCO_2e$ and 5.6 $MtCO_2e$ and a total Scope 1, 2 and 3 of 130 $MtCO_2e$. The data applied in this Scope 3 Methodology Report being rebased data to recognise the Thungela Resources demerger and align the organisational boundary reported for Scope 1, 2 and 3.

Anglo American Scope 1, 2, and 3 emissions (Scope 3 by Category and major constituent)	FY2020 Scope 3 GHG emissions ($MtCO_2e$) (excluding biogenic emissions[4])	% of total Scope 1, 2, and 3 emissions (%)[5]
Category 11 ***Use of sold products***	28.14	21.6%
Metallurgical Coal	21.13	16.3%
Category 12 ***End-of-life treatment of sold products***	0	0.0%
Category 13 ***Downstream leased assets***	0	0.0%
Category 14 ***Franchises***	0.01	~0.0%
Category 15 ***Investments***	10.59	8.1%
Total Scope 3	**114.79**	**88.3%**

1.11 Data quality framework and assessment

We have applied a data quality score to each FY2020 Scope 3 GHG result reported by business units in each category. The framework is adapted from: Weideman and Wesnaes, 1996. This scoring should be read in conjunction with:

- Any comments regarding the model approach for the category or business unit in relation to the GHG Scope 3 accounting and reporting principles.
- The methodological steps taken in arriving at the GHG emissions results.

Whilst we have not provided a quantitative assessment of the uncertainty of reported results, the data quality scoring provides an indication of certainty with regard to completeness and estimated accuracy.

2. Scope 3 emissions methodology details

2.1 Category 1 Purchased Goods and Services

Table 3: *Anglo American FY2020 Scope 3 emissions results overview for Category 1*

Category 1	
Category Description	Extraction, production and transportation of goods and services purchased by the company in the reporting year
Total Scope 3 Emissions ($MtCO_2e$)	7.01
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Good
Activity Data Source	Anglo American internal procurement monitoring and reporting model
Emissions Data Source [portion of data provided by 3rd parties]	Quantis Suite Scope 3 Evaluator [0%]
Exclusions	None

Calculation Status Rationale

The emissions from this category are not material but are relevant to the company's Scope 3 emissions inventory and for the users of the data; for raising internal awareness and providing the basis from which opportunities for mitigation may be identified including sourcing strategies and shifting upstream performance, and consequent performance tracked.

The activity data in this category were prioritised due to the influence that the company has over them. The company has the ability and leverage to pressure on suppliers to improve their ecological credentials and source materials from alternative suppliers with improved performance.

As suppliers become more accustomed and sophisticated in their emissions reporting, actual Scope 1 and 2 emissions from key suppliers will be used for material purchase categories to hone in on accuracy and capture emissions abatement efforts from leading suppliers.

Activity Exclusions and Rationale

The procurement spend from Anglo American's internal records were noted from supply chain and procurement personnel as being >90% accurate. Omissions and errors inherent in the Anglo American procurement data are therefore inherent in these results; however, there were no notable exclusions flagged from the reporting data.

Calculation methodology

The US dollar (USD) operating expenses (Opex) spend for the FY2020 period was collected in the Anglo American procurement model by internal personnel. The Opex spend, which was categorised according to a labelling system in the Anglo American model, was then categorised according to the most suitable emissions factor classification present in the Quantis Suite Evaluator.

The Opex spend was therefore classified into 19 categories and the spend-based emissions factor from the Quantis Suite Evaluator used to yield an emissions rate attributable to the Opex spend in the reporting year.

Allocations and Key Assumptions

It has been assumed that the suppliers of the goods and services produce emissions in line with industry average estimates, within the assigned spend categories.

It has also been assumed that the spend-based emissions factors in the Quantis Suite Evaluator are representative of the organisations, geographies and activities associated with Anglo American's Opex spend in FY2020.

2.2 Category 2 Capital Goods

Table 4: *Anglo American FY2020 Scope 3 emissions results overview for Category 2*

Category 2	
Category Description	Extraction, production and transportation of capital goods purchased by the company in the reporting year
Total Scope 3 Emissions ($MtCO_2e$)	6.98
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Good
Activity Data Source	Anglo American Integrated Annual Report (2020) as USD Capex spend for FY2020
Emissions Data Source [portion of data provided by 3rd parties]	Quantis Suite Scope 3 Evaluator [0%]
Exclusions	None

Calculation Status Rationale

The emissions from this category are not material but are relevant to the company's Scope 3 emissions inventory and for the users of the data; for raising internal awareness and providing the basis from which opportunities for mitigation may be identified and performance tracked.

The company does have considerable control over the design and type of capital goods purchased. The inclusion is also relevant as these goods are long-term in nature and, particularly with regard to equipment and plant machinery, can be made more efficient and less environmentally harmful through innovation and investment in superior capital goods. This is especially pertinent in managing transition risk and for supporting the transition of key capital inputs and decisions made by Anglo American.

Activity Exclusions and Rationale

There were no exclusions in this category as the data used was based on an overall spend activity which was apportioned between each business unit, as provided in the Integrated Annual Report for FY2020.

Calculation methodology

The group's FY2020 spend on plant, property and equipment was drawn from the Integrated Annual Report and an industry average emissions factor, from the Quantis Suite Scope 3 Evaluator, applied using the spend-based methodology.

Allocations and Key Assumptions

Capital expenditure for FY2020 at an individual operation level has been applied where activity data in the form of capital spend has been available, such as for Quellaveco and Woodsmith. For the operations where disaggregated capex data was not available at operations level, it has been assumed that the capital goods expenditure for FY2020 could be apportioned to the corporate entity for each business unit, as reported in the Integrated Annual Report at which level capex is disclosed.

It has been assumed that the capex figures reported in the Integrated Annual Report are reflective of Capex activities in the FY2020 period and that the spend-based emissions factors in the Quantis Suite Scope 3 Evaluator are representative of the organisations, geographies and activities associated with Anglo American's Capex in FY2020.

2.3 Category 3 Fuel and Energy-related Activities

Table 5: *Anglo American FY2020 Scope 3 emissions results overview for Category 3*

Category 3	
Category Description	Extraction, production and transportation of fuels and energy purchased by the company in the reporting year
Total Scope 3 Emissions ($MtCO_2e$)	1.34
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Good
Activity Data Source	Anglo American data management systems as volumes for liquid and gaseous fuels; mass for solid fuels; and MWh for electricity purchased
Emissions Data Source [portion of data provided by 3rd parties]	Secondary, industry average data (BEIS UK, 2020) [0%]
Exclusions	Final leg transportation and distribution emissions not included (estimated at around 1% of total Category 3 emissions for each fuel)

Calculation Status Rationale

The upstream emissions arising from the fuels purchased are not material considering the overall Scope 3 emissions. However, they have been calculated as the consumption of fuels in operations is a key activity and accounts for considerable expenditure for the company. Mapping the upstream emissions from these fuels allows consideration for the broad footprint of these activities beyond Scope 1 and Scope 2 combustion emissions.

It is also possible for the company to make alternative purchasing decisions in terms of increasing inclusion of biogenics in some fuels and (as accuracy of the Scope model is enhanced and greater data direct from suppliers) to make alternative purchasing decisions based on carbon efficiency of upstream fossil fuel producers and transporters.

More significantly, the company's Carbon Neutral strategy and roadmap prioritises a shift away from fossil fuels, drive operational electrification, and take up on alternative fuels. and renewable energy sources. Monitoring and reporting Scope 3 Category 3 performance is an important part of the management function, as the strategy is implemented, and this area is transformed.

Activity Exclusions and Rationale

There are no exclusions for types of fuels or operations in terms of upstream emissions arising from fuel-related activities. All fuel- and energy-related purchases have been included for product and operation.

The emissions factor applied is a well-to-tank factor, that does not specifically include an estimation of emissions associated with a "final leg" – i.e., a journey for fuels and energy from reasonably assumed central location to each operation. The emissions contribution of this final haulage is anticipated not to be material and due to uncertainty concerning the exact origin and logistics of bringing fuels and energy to each company site, a further computation has not been included.

Some operations may be further from the regional fuel hub, in a given territory, which would necessitate greater distance of haulage and therefore more upstream emissions. It is assumed the generic well-to-tank proxy provides substantially complete coverage of emissions associated with this activity. It is recommended for future inclusion as the Scope 3 reporting processes are refined.

Calculation methodology

The volume or mass of each fuel procured by the operations in the period has been multiplied by the corresponding well-to-tank emissions factors to yield the total upstream emissions attributed to each fuel/energy type.

For electricity used in each operation, the transmission and distribution (T&D) losses and well-to-tank emissions were taken from Department of Business, Energy & Industrial Strategy (2020) factors and used for the corresponding activity data.

Allocations and Key Assumptions

It has been assumed that the suppliers of the fuels and energy products produce emissions in line with industry average estimates for embedded carbon and in line with national averages for electricity energy losses.

2.4 Category 4 Upstream Transportation and Distribution

Table 6: *Anglo American FY2020 Scope 3 emissions results overview for Category 4*

Category 4	
Category Description	Transportation and distribution of products purchased by the company between tier-1 suppliers and its own operations
Total Scope 3 Emissions ($MtCO_2e$)	0.13
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Good
Activity Data Source	Anglo American internal procurement monitoring and reporting model
Emissions Data Source [portion of data provided by 3rd parties]	Quantis Suite Scope 3 Evaluator [0%]
Exclusions	None

Calculation Status Rationale

The upstream transportation and distribution of purchased goods is not considered to have a material impact on the overall Scope 3 emissions; however, the company's influence over suppliers, delivery frequencies and modes and the company's exposure in this regard to climate risks makes these activities a priority for this exercise.

Activity Exclusions and Rationale

Any inaccuracies in the data for goods and services as for Category 1 because of the procurement model limitations, has similarly been excluded from these calculations

It is anticipated that the emissions associated with this exclusion may have a negligible impact on the overall upstream transportation and distribution emissions accounted and does not detract from the relevance of the information reported for users.

Calculation methodology

Air freight expenditure has been included in Category 4 for all operations and business units, except for Diamonds and PGMs whose air freight expenditure was included in Category 9.

For Scope 3 categorisation purposes, the road freight and warehousing expenditures have been split equally between Category 4 and Category 9 as it is unclear whether the expenditure was attributable to inbound or outbound logistics. This would seek to be enhanced in time as the procurement model advances in maturity to label inbound and outbound logistics expenditure.

These freighting and warehousing expenditures were assigned to the corresponding spend-based emissions factor from the Quantis Suite Scope 3 Evaluator.

These Category 4 emissions for own-mined product volumes were used as proxies for the upstream logistics associated with the 3rd Party traded products in the FY2020 and these emissions factors applied to the volumes of 3rd Party traded products in the 2020 reporting period.

Allocations and Key Assumptions

It has been assumed that the suppliers of the logistics and distribution services produce emissions in line with industry average estimates.

It has also been assumed that the spend-based emissions factors in the Quantis Suite Evaluator are representative of the organisations, geographies and activities associated with Anglo American's Opex spend in FY2020.

2.5 Category 5 Waste Generated in Operations

Table 7: *Anglo American FY2020 Scope 3 emissions results overview for Category 5*

Category 5	
Category Description	Disposal and treatment of waste generated by the company's operations in the reporting year
Total Scope 3 Emissions ($MtCO_2e$)	0.10
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Fair
Activity Data Source	Anglo American data management systems as mass and type of waste produced in 2020
Emissions Data Source [portion of data provided by 3rd parties]	Secondary, industry average data (BEIS UK, 2020) [0%]
Exclusions	None

Calculation Status Rationale

Scope 3 emissions from waste generated in operations is not material but has been calculated due to the influence that the company has over these activities and the importance given to the mitigation and treatment of waste by stakeholders.

Activity Exclusions and Rationale

There have been no exclusions from this category as all significant waste has been recorded and accounted.

Calculation methodology

The activity data received from the internal systems in the form of mass per waste type was recorded for each operation. The emissions data comprised of the industry average (secondary) data for waste treatment and for goods freighting (to quantify the waste transportation emissions) using Department of Business, Energy, & Industrial Strategy (BEIS UK, 2020) emissions factors. The primary data on the distance from the operations to the waste treatment site were aggregated to provide an average waste transportation distance per operation.

The goods freighting emissions factors (tCO_2e/km) were multiplied by the average distance per operation to yield waste transportation emissions that were added to the waste handling and treatment emissions for waste generated and treated off-site.

Allocations and Key Assumptions

It was assumed that all materials and respective quantities were hauled off site and treated in facilities not owned or controlled by the company. Bulk mining wastes were not included, on the understanding that these wastes are not handled off-site.

Distances to the various waste treatment site were aggregated for each operation and multiplied by a goods freighting emission factor, meaning that the emissions are based on aggregated transportation estimates. It was assumed that the waste was transported in a heavy goods vehicle.

2.6 Category 6 Business Travel

Table 8: *Anglo American FY2020 Scope 3 emissions results overview for Category 6*

Category 6	
Category Description	Transportation of employees for business-related activities during the reporting year (in vehicles not owned by the company)
Total Scope 3 Emissions ($MtCO_2e$)	0.01
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Very Good
Activity Data Source	Third party providers (FCM Travel) in the form of GHG emissions resulting from air travel, car rental and accommodation nights by Anglo American personnel
Emissions Data Source [portion of data provided by 3rd parties]	Third party provider (FCM Travel) [100%]
Exclusions	None

Calculation Status Rationale

The emissions under this category are not considered to be material to the overall Scope 3 emissions inventory; these have been calculated in accordance with the principles of completeness and transparency. The company has substantial influence over the extent, modes and class of travel undertaken for business travel and opportunity to create internal awareness, adapt behaviour and reduce emissions in this category.

Activity Exclusions and Rationale

It has been assumed that all business travel emissions are contained in flights, hotel stay, and car rental emissions recorded by FCM. Business travel outside of these boundaries have not been calculated (most notably business travel in employee own vehicles), but these are deemed to be insignificant to this Category and indeed the overall Scope 3 emissions inventory.

Calculation methodology

FCM Travel, Anglo American's travel services coordination provider, provided the activity and emissions data for the 2020 reporting period, reported down to a business unit level. The data received from FCM Travel contained the air travel, car rental, and accommodation stays for the Anglo American personnel in the period and the emissions factors for each of these categories, according to their methodologies. The methodologies are aligned to the GHG Protocol Standard.

The FCM methodologies for air travel, car rental and accommodation are as follows:

Air: emissions calculated based on distance travelled in the period by short haul (0.73 $kgCO_2e/km$); medium haul (0.59 $kgCO_2e/km$); and long haul (0.54 $kgCO_2e/km$).

Car rental: assumed 82 km of travel per business day at a consumption of 8.9 km/l resulting in emissions of 2.36 $kgCO_2e$/litre plus a 5% adjustment for the increased GWP of methane and nitrous oxide emissions.

Accommodation: emissions based on the nightly room emissions index of 13.9 $kgCO_2e$ per room per night.

Adjustments and rebasing

The COVID-19 travel restrictions were noted as severely limiting the Business Travel activities in FY2020, and whilst post-COVID return to business activities may be diminished from historical precedents, the extent of the rebound is presently uncertain. Given that the FY2020 period is considered anomalous as Covid-19 travel restrictions saw large-scale shifts in business practices and highly restricted domestic and international travel and given that FY2020 is selected as the base year and data from the period may not be representative of near-term future emissions performance in this category, these emissions were re-based. This

is in accordance with the interpretation of guidance provided by ISO14064-1:2018 *Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*.

As such, Business Travel emissions were revised upwards to equal the Business Travel Scope 3 emissions in the 2018 inventory (less the travel associated with Coal SA operations) to represent a more representative reporting period for the company.

Allocations and Key Assumptions

It has been assumed that the emissions data and activity data from the third party provider are an accurate and complete representation of the group's business travel emissions.

In keeping with the Category 6 allocations to the corporate entities for each business unit in the preceding Scope 3 inventory, Business Travel emissions have been allocated to "Corporate" for each commodity where a substantial proportion of these activities are expected to derive from.

2.7 Category 7 Employee Travel

Table 9: *Anglo American FY2020 Scope 3 emissions results overview for Category 7*

Category 7	
Category Description	Transportation of employees between their homes and their worksites during the reporting year (in vehicles not owned by the company)
Total Scope 3 Emissions ($MtCO_2e$)	0.42
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Poor
Activity Data Source	Limited operations-level activity data from internal data requests and employee figures from the Integrated Annual Report
Emissions Data Source [portion of data provided by 3rd parties]	Secondary, industry average data (BEIS UK, 2020) [0%]
Exclusions	None

Calculation Status Rationale

The emissions from employee travel are considered to be immaterial to the group's overall Scope 3 emissions. The reason for inclusion in the Scope 3 inventory is to raise awareness internally and to ensure completeness in the Scope 3 inventory.

Activity Exclusions and Rationale

None.

Calculation methodology

For bus and minibus travel, the total daily distance travelled estimated is used as an activity data input. The distance is an estimated average distance between the operation and the residential location of most employees. The bus and minibus daily distances are then multiplied by the industry average emissions factor for each vehicle corresponding to the number of trips undertaken in the reporting year.

For private vehicle travellers, the number of person trips taken per annum were estimated and again multiplied by the emissions factor applicable to each operation based on the estimated averaged distance between the operation and the residential location of most employees and an average fossil-fuelled car.

For fly-in fly-out (FIFO) trips the number of person trips was used together with the average distance of all FIFO trips in the reporting period assuming an economy class seat.

Allocations and Key Assumptions

It has been assumed that the bus and minibus trips were fully laden, that is 20 people per minibus and 50 per bus.

For bus and minibus trips, it is assumed that the employees travel 365 days per year, given that the mine is operational all year round. Additionally, it was assumed that a bus would use 22 litres of diesel per 100 km, and a minibus 15 litres of petrol per 100 km.

For individual car trips, it is assumed that employees make return trips 230 days per year allowing for leave, weekends, and public holidays.

For business units where activity data was not available on employee commuting, an estimation was applied using the ratios of employees travelling by bus, mini-bus and passenger vehicle which was 60% by bus, 30% by mini-bus and 10% by private passenger vehicle. Where no operation-level data was provided, the employee commuting emissions were allocated evenly across the operations in each business unit.

2.8 Category 8 Upstream Leased Assets

This emissions inventory boundary is defined to include all leased assets for which the group has operational control and the emissions for which are not captured in the reporting company's Scope 1 and 2 inventories. Anglo American's leased asset operational emissions are included and quantified in the Scope 1 and 2 inventories, and no further emissions are relevant for reporting in this Category for the FY2020 period.

The optional Scope 3 (upstream) emissions, representing the life cycle emissions to manufacture and then transport the leased assets to Anglo American's facilities, have not been quantified and included in this Scope 3 inventory.

2.9 Category 9 Downstream Transportation and Distribution

Table 10: *Anglo American FY2020 Scope 3 emissions results overview for Category 9*

Category 9	
Category Description	Transportation and distribution of products sold by the company in the reporting year between the company's operations and the consumer (in vehicles not owned by the company)
Total Scope 3 Emissions ($MtCO_2e$)	2.40
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Good
Activity Data Source	Anglo American internal procurement monitoring and reporting model and third-party logistics provider (Rightship) (67%)
Emissions Data Source [portion of data provided by 3rd parties]	Quantis Suite Scope 3 Evaluator and third-party logistics provider (Rightship) [67%]
Exclusions	None

Calculation Status Rationale

Downstream transportation and distribution emissions of Iron Ore as a bulk commodity are considered as material to overall Scope 3 emissions. This product type accounts for most emissions arising from downstream transportation and distribution activities, due to customer distances being notably greater than for the other commodity types and the significance of the quantity of bulk product moved. In prior modelling, shipping of thermal coal from SA operations also contributed materially to this category; this has not been accounted for FY2020 base year as explained above.

The emissions from this category have been calculated due to the materiality, climate-risk exposure and the company's influence over logistics and freighting supplier practices. Moreover, bulk shipping in this category is the subject of focused organisational cooperation and emissions reduction efforts, with measures to monitor progress.

Activity Exclusions and Rationale

No material exclusions were noted for the downstream logistics and distribution Scope 3 reporting. The limitations and classification errors, wherein the expenditure on logistics or distribution services was not designated in the Anglo American model would be passed through to these calculations; however, these are not expected to be material.

Calculation methodology

Air freight expenditure has been included in Category 9 for Diamonds and PGM operations as these commodities are considered as precious minerals that are often transported via air freight to their destinations.

All rail freight expenditure in FY2020 has been assigned to the Category 9 as a considerable portion of the bulk commodities (iron ore and coal particularly) are transported from the operations or nearby distribution hubs via rail to the ports and harbours for onward shipping.

For Scope 3 categorisation purposes, the road freight and warehousing expenditures have been split equally between Category 4 and Category 9 as it is unclear whether the expenditure was attributable to inbound or outbound logistics. This would seek to be enhanced in time as the procurement model advances in maturity to label inbound and outbound logistics expenditure.

These freighting and warehousing expenditures were assigned to the corresponding spend-based emissions factor from the Quantis Suite Scope 3 Evaluator.

These Category 9 emissions for own-mined product volumes were used as proxies for the upstream logistics associated with the 3rd

Party traded products in the FY2020 and these emissions factors applied to the volumes of 3rd Party traded products touched in the 2020 reporting period.

Regarding the second journey ('leg') emissions for the bulk products that used sea freight, information was sourced from a third party provider, Rightship. Rightship records the shipping charters for the reporting company and the cargo types and volumes to determine the attributable carbon emissions. Rightship calculates emissions according to the EN 16258 standard and uses the AR4 GWP metrics for methane and nitric oxide emissions. The emissions include well-to-propeller emissions estimated at 10% of direct combustion emissions. In this model the Rightship emissions factor per tonne cargo shipped has been applied to the tonnage of products sold by the company in the reporting period.

The commodities for which Rightship data has collected include thermal coal, metallurgical coal, iron ore, copper, chrome, and 3rd Party traded thermal coal, metallurgical coal and iron ore. There were Rightship emissions sources labelled for products outside of the recognised commodity groups in Anglo American, namely bauxite and grain, which were recorded under the Group Corporate entity.

Allocations and Key Assumptions

It has been assumed that the suppliers of the logistics and distribution services produce emissions in line with industry average estimates.

It has also been assumed that the spend-based emissions factors in the Quantis Suite Evaluator are representative of the organisations, geographies and activities associated with Anglo American's Opex spend in FY2020.

2.10 Category 10 Processing of Sold Products

Table 11: ***Anglo American FY2020 Scope 3 emissions results overview for Category 10***

Category 10	
Category Description	Processing of intermediate products sold in the reporting year by downstream companies
Total Scope 3 Emissions ($MtCO_2e$)	58.04
Calculation Status	Material, calculated
Overall Data Quality Indicator	Good
Activity Data Source	Anglo American Marketing FY2020 sales data templates and 2020 Integrated Annual Report
Emissions Data Source [portion of data provided by 3rd parties]	Customer-specific steelmaking emissions [40%] and secondary, industry average data (IPCC 2006, Eco-Invent 2016, International Stainless Steel Forum 2015, World Steel 2019, World Steel 2020, Hao et al. 2017, Tractabel 2018, and Physics Procedia 2014, South32 2021).
Exclusions	Molybdenum downstream GHG emissions (immaterial)

Calculation Status Rationale

The emissions attributed to the processing of sold products are considered material and of significant importance. These emissions have been calculated due to the magnitude of GHG emissions arising from the processing of the products sold, particularly iron ore, metallurgical coal and copper. Processing emissions for each operation were calculated for completeness and to provide a wholistic account of the downstream emissions profile.

Category 10 represents the areas in Anglo American's value chain where considerable abatement effort is required to reduce the Scope 3 inventory.

Adjustments and rebasing

In the reporting period there were production disruptions at the Grosvenor Metallurgical Coal operation in Australia. As such, these emissions were uplifted by 139% to yield a metallurgical coal product volume that is representative of a reflective year. The adjustment made to this site had the effect of increasing total metallurgical coal volumes in the Scope 3 modelling by 11%.

Activity Exclusions and Rationale

Molybdenum volumes, a by-product from the Copper operations, were not collected in 2020 and as such have been excluded. This exclusion is immaterial to the Group Scope 3 inventory and would represent less than 0.1% of the total Scope 3.

Secondary processing emissions in the manufacturing of steel are not included in the reporting boundary.

Calculation methodology

Iron Ore and *Metallurgical Coal:*

For 2020, as an advancement on previous Iron and Steel emissions accounting practices, customer-specific emissions and conversion factors were sought to better represent Anglo American's actual customer base. Iron Ore sintering and pelletisation, metallurgical coal coking and blast furnace to basic oxygen furnace (BF-BOF) and direct reduction to electric arc furnace (DRI-EAF) emissions factors were collected by Anglo American internal experts (using customer provided information) and the CRU Group's Emissions Analysis Tool, wherever possible.

This was aggregated to a portfolio level to derive two weighted-average steelmaking emissions factors, one each for BF-BOF and DRI-EAF processing routes.

This was possible where both the customer was known, and customer performance data was available as described above, for both own mined product and 3rd party traded product.

Where data on the specific customers and facilities were not available (whether own mined product or 3rd party traded product),

World Steel (2019) and Material Economics (2018) industry averages were used to bridge this gap.

The volume of own-mined metallurgical coal and Iron Ore sold in the reporting period was converted into crude steel equivalent, again using customer-specific conversion factors wherever available. These conversion factors utilise a mass apportionment approach to determine the amount of iron ore, metallurgical coal (as relevant to BF-BOF) or natural gas (as relevant to DRI-EAF) required to produce a unit of crude steel.

For the BF-BOF processing route, the shared volume of crude steel equivalent between the two commodities, that is the lower crude steel equivalent volume of the two, was then multiplied by the total crude steel emissions factor for the BF-BOF processing route.

The crude steel equivalent volume of Iron Ore sold to DRI-EAF customers was similarly multiplied by the total crude steel emissions factor for the DRI-EAF route, and the emissions that would be apportioned for the natural gas provider (which is not an Anglo American commodity) is reported to the 'Discretionary Inventory'.

The excess crude steel equivalent volume, which was attributable to Iron Ore in FY2020, is then accounted for using the same conversion and emissions factors as for the shared volume. This would apply inversely in future period should metallurgical coal equivalent steel volume create the 'excess'.

Finally, the emissions attributable to the excess crude steel equivalent volume of Iron Ore in 2020 to BF-BOF customers has been accounted for in the Scope 3 inventory using the Iron Ore to metallurgical coal ratio to avoid reporting the Scope 3 emissions of 3rd Party commodity suppliers.

Copper: the emissions for each segment of the Copper value chain was determined (from Copper Concentrate mining and refining through the subsequent stages; Copper Anode production, Copper Cathode production, and Copper sheet rolling). Depending on the product produced at an operation (and therefore how integrated the process is), the processing emissions for the processing steps down the value chain to copper sheet rolling were applied. The emissions up the value chain were subtracted to avoid double counting of emissions.

Nickel: Ferronickel volumes sold in 2020 were multiplied against a stainless steel manufacturing emissions factor, as it was assumed that all this product is used for that end use. Separately, pure Nickel volumes sold in 2020 were multiplied against a battery manufacturing emissions factor for nickel manganese cobalt (NMC) batteries.

3rd Party Iron Ore, Metallurgical coal, and Copper: the 3rd Party product volumes traded in 2020 were computed using the same methodologies as the own-mined product volumes, but distinctly. An Economic Benefit Margin on these 3rd Party traded product volumes was used across all relevant Scope 3 categories to determine the Scope 3 emissions figure in the FY2020 inventory.

Diamonds: an estimation has been made regarding the electricity usage from laser cutting equipment used to process sold diamonds before being used in jewellery or industrial application. The volume of diamonds sold has then been multiplied by this electricity-based emissions factor. This is an area of emissions methodology improvement underway to determine a more accurate approach to emissions intensity for these processes, for inclusion in future modelling.

Manganese: data was not readily available on the emissions intensity of manganese ore smelting and alloy processing and, as such, an estimation of the emissions factor for manganese was done using the Scope 1 and 2 emissions for Manganese smelting at South32 facilities. This emissions factor was then applied to the total Samancor Manganese volumes for the period.

Allocations and Key Assumptions

Iron Ore: the collection of customer-specific emissions and conversion data notably reduced the assumptions needed to compute the Category 10 and 11 emissions for these commodities.

The input intensity factors used to calculate the amount of crude steel equivalent for each commodity, at a portfolio level was derived on a customer specific weighted average performance basis, differentiating between the two processing routes: BF-BOF, and DRI-EAF.

Additionally, not all of the Iron Ore sold is required to be sintered or pelletised and it was assumed that 80% of the Iron Ore sold would be sintered, 8% would be pelletised and 12% would be lump ore that would not need to be prepared before being fed into the BF, based on Anglo

American specialists' judgement and experience.

Similarly, it was assumed that 80% of the metallurgical coal sold would be coked before being fed into the BF with 20% being pulverised coal injection (PCI) and not requiring coking in a coke oven.

Nickel: assumed that all Ferronickel produced is used for stainless-steel production and that stainless steel has an 8% Nickel content. The iron content of stainless steel is typically 67%. Due to the fact that Anglo American makes Ferronickel, the attributable Nickel content in the stainless steel is 75%. As such, the stainless-steel emissions factor is multiplied by 0.75 to yield the attributed emissions to Nickel. The emissions associated with processing Nickel into stainless-steel have been included under the processing of this sold product.

Diamonds: due to limited data availability, the electrical energy consumption for a 2.5 KW laser cutting machine was used as a proxy for processing emissions from Diamond cutting. The emissions intensity of the electrical energy consumed was assumed to be representative of the Indian electricity grid (0.7 tCO_2e/MWh).

2.11 Category 11 Use of Sold Products

Table 12: ***Anglo American FY2020 Scope 3 emissions results overview for Category 11***

Category 11	
Category Description	End use of goods and services sold by the company in the reporting year
Total Scope 3 Emissions ($MtCO_2e$)	28.14
Calculation Status	Material, calculated
Overall Data Quality Indicator	Good
Activity Data Source	Anglo American Marketing FY2020 sales data templates and 2020 Integrated Annual Report
Emissions Data Source [portion of data provided by 3rd parties]	Customer-specific steelmaking emissions [40%] and secondary, industry average data (IPCC 2006, Eco-Invent 2016, World Steel 2019, World Steel 2020, BEIs 2020).
Exclusions	None

Calculation Status Rationale

The direct use phase of the sold products is considered to be material for the following commodity types: iron ore, metallurgical coal, and thermal coal. For completeness, direct use phase emissions for PGMs have been computed, although these are not considered material.

Adjustments and rebasing

In the reporting period there were production disruptions at the Grosvenor Metallurgical Coal operation in Australia. As such, these emissions were uplifted by 139% to yield a metallurgical coal product volume that is representative of a reflective year, based on an average of the past four years. The rebase has been undertaken in conformance to ISO 14064-1:2018 *Greenhouse gases — Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*. The adjustment made to this site had the effect of increasing total metallurgical coal volumes in the Scope 3 modelling by 11%.

Activity Exclusions and Rationale

Nickel: the use phase emissions for Nickel have been excluded on the presumption that there is great uncertainty on the uses of the stainless steel and the accuracy of the end-use calculation without knowing the final products would be low.

Diamonds: information on the emissions associated with the use phase of diamonds was very limited and uncertain. Due to this and the immaterial contribution of this category for this business unit, it has been excluded from our calculations.

All indirect use-phase emissions have been excluded from consideration in these results. Indirect use phase estimations would need to be based on the mass of the commodities embedded in final products and assumptions concerning the use profiles of those products, which would be based upon unsupported assumptions and estimations with the number of variables to consider for each commodity too great to quantify with reasonable certainty. As these final product constituent elements become more integrated with other materials and systems, attribution of emissions to base products is anticipated to diminish commensurately with this diffusion.

Calculation methodology

Metallurgical coal: The steelmaking Scope 3 emissions for Met Coal are captured in Category 11. The methodology for the calculation follows the same steps as described in Category 10 for Iron Ore. The 34% mass apportioned share of the steelmaking emissions are allocated to metallurgical coal in Category 11.

Metallurgical Coal Methane Gas Sales: the volume of methane gas generated and sold at the Metallurgical Coal operations and transferred to power generation companies who combust the methane have been included. The volume of methane sold was multiplied by

the combustion factor for methane gas to yield the total emissions rate for these volumes.

Thermal Coal: Department of Business, Energy, & Industrial Strategy (BEIS UK, 2020) coal combustion for electricity generation emissions factor was applied to the tonnage of thermal coal sold in FY2020 to yield the use phase emissions for thermal coal. The application of thermal coal to other uses is considered marginal. Following the demerger and divestment of Thermal Coal operations only thermal coal from the Metallurgical Coal operations and 3rd Party traded thermal coal volumes are applicable.

PGMs: The PGMs produced by the PMR facility were multiplied an emissions factor based on Scope 1 and Scope 2 emissions of a catalyst producer in 2014 (CDP, 2019) to derive emissions from catalyst production. Other applications of PGMs are noted but considered marginal.

3rd Party Metallurgical Coal, Thermal Coal and PGMs: the 3rd Party product volumes traded in 2020 were computed using the same methodologies as the own-mined product volumes. An Economic Benefit Margin on these 3rd Party traded product volumes was used across all relevant Scope 3 categories to determine the Scope 3 emissions figure in the FY2020 inventory.

Allocations and Key Assumptions

If metallurgical coal sales volumes produced a greater amount of crude steel equivalent, the excess crude steel equivalent attributable to metallurgical coal would be captured in Category 11. Again, the mass apportionment approach (66%:34% Iron Ore to metallurgical coal) would be used to account for Category 11 emissions attributable to Anglo American for this excess crude steel. The emissions and conversion factors used for this excess crude steel are based on industry averages and combustion emissions factors rather than customer-portfolio approach, as potential carbon abatement from improved customer efficiency is not deemed to be attributable to the metallurgical coal unless the abatement comes from carbon capture, utilisation and storage (CCUS).

PGM sales were disaggregated into the volumes of Platinum, Palladium, Rhodium, and Ruthenium and Other Metals. Each of these PGM categories is used for different purposes but are broadly used in jewellery, investment, or industrial applications such as automotive catalysts. Only industrial end-use applications were considered to generate material emissions for PGMs and therefore only industrial applications were calculated in Category 11.

64% of Platinum and Ruthenium and Other Metals volumes were assumed to be used for industrial end-use applications, while 99% of Palladium and Rhodium volumes were assumed to be used for industrial end-use applications.

.

2.12 Category 12 End-of-Life Treatment of Sold Products

Table 13: *Anglo American FY2020 Scope 3 emissions results overview for Category 12*

Category 12	
Category Description	Waste disposal and treatment of products sold by the company in the reporting year
Total Scope 3 Emissions ($MtCO_2e$)	n/a
Calculation Status	Not material, not calculated
Overall Data Quality Indicator	n/a
Activity Data Source	n/a
Emissions Data Source [portion of data provided by 3rd parties]	n/a
Exclusions	n/a

Calculation Status Rationale

The emissions arising from the end-of-life treatment of the company's sold products is deemed to have immaterial impacts on overall Scope 3 emissions. In the FY2018 this category was calculated and noted be not material.

For the time being, the level of value chain transparency and product traceability is low, and calculations are based upon unsupported assumptions and estimations with the number of variables to consider for each commodity too great to quantify with reasonable certainty. Furthermore, there is not yet fair consensus on approaches and methodology for recognition and apportionment of emissions. As such, this has not been calculated for any commodity.

2.13 Category 13 Downstream Leased Assets

This emissions inventory boundary is defined to include all assets owned by Anglo American and leased onwards for use by an external entity. Anglo American has not leased any material assets to other entities in the FY2020 period. As such, the optional Scope 3 (upstream) emissions, representing the life cycle emissions to manufacture and then transport the assets from Anglo American's facilities to the lessee, are not relevant in this Scope 3 inventory.

2.14 Category 14 Franchises

Table 14: *Anglo American FY2020 Scope 3 emissions results overview for Category 14*

Category 14	
Category Description	Operation of franchises in the reporting year not included in Scope 1 and Scope 2
Total Scope 3 Emissions ($MtCO_2e$)	0.01
Calculation Status	Not material, calculated
Overall Data Quality Indicator	Fair
Activity Data Source	Third-party Scope 3 emissions reports for De Beers and Forevermark outlets globally
Emissions Data Source [portion of data provided by 3rd parties]	Third-party Scope 3 emissions reports for De Beers and Forevermark outlets globally [100%]
Exclusions	None

Calculation Status Rationale

In all respects aside from Diamonds (discussed below), the company does not operate on a franchise model and as such has no franchisees to which emissions can be attributed.

In terms of Diamonds, De Beers Jewellers was launched in 2017. Customer facing stores are operated on a franchise model, with stores in China, Russia, Japan, USA and Saudi Arabia. The emissions arising from the associated activities are not material and are reported for completeness and transparency. While there are differences in the licensing and operating models for De Beers Jewellers and Forevermark (licencing and core), for the purposes of coherent reporting at Anglo American level, these have been collated under this Category 14.

Activity Exclusions and Rationale

None.

Calculation methodology

The Scope 1 and 2 emissions for these franchises has been calculated by a third-party provider for the FY2018 year. The Scope 1 and 2 emissions for these franchises have not been calculated since this undertaking and, as such, these FY2018 figures have been carried forward to the FY2020 period as an estimation. This was deemed sufficient as these emissions are relatively non-material at Anglo American Group level and considering potential disruptions to activities in FY2020 which are unlikely to remain dampened post-COVID.

The total Scope 1 and 2 emissions for the De Beers Jewellers and Forevermark franchises has been recorded and presented ‘as is’ from the third-party reports.

Allocations and Key Assumptions

None.

.

2.15 Category 15 Investments

Table 15: ***Anglo American FY2020 Scope 3 emissions results overview for Category 15***

Category 15	
Category Description	Operation of investments in the reporting year not included in Scope 1 and Scope 2 including upstream and downstream emissions for these entities
Total Scope 3 Emissions ($MtCO_2e$) comprising Scope 1 and 2 of Non-Managed Assets	2.43
Total Scope 3 Emissions (tCO_2e) comprising Scope 3 of Non-Managed Assets	8 155 681
Calculation Status	Material, calculated
Overall Data Quality Indicator	Good
Activity Data Source	Anglo American Marketing FY2020 sales data templates and 2020 Integrated Annual Report
Emissions Data Source [portion of data provided by 3rd parties]	Primary emissions data on Scope 1 and 2 emissions wherever available [47%] Proxy data from Anglo American managed operations wherever available [20%] Secondary, industry average data where primary or proxy data was not available [80%]
Exclusions	None

Calculation Status Rationale

The emissions attributed to the company's economic interests in other entities has been calculated. These non-managed operations are core to the company's business model and the rationale for calculation is the material nature of emissions relating to those operations and their value chains, the material nature of the investments in these entities, the materiality of the revenue generated from these enterprises and, although not holding operational control, the potential influence that Anglo American may exert on the performance of these entities (as well as the relevance of their performance in terms of climate-related risk exposure).

Activity Exclusions and Rationale

There are no material exclusions from Category 15 in the re-based Scope 3 inventory (noting the particulars and rationale for the constituents removed and adjusted for the model, concerning Thungela Resources and Cerrejón). As a result of the re-base event, the Scope 1, 2, and 3 emissions from the Cerrejón and Mafube Thermal Coal operations have been removed as these are no longer investments of Anglo American.

Calculation methodology

For all emissions calculations concerning non-managed operations, financial exposure was considered in terms of equity share, that is the equity holding that Anglo American has in these operations, is the consolidation approach used to account for their Scope 1, 2, and 3 emissions. As recommended in the Partnership for Carbon Accounting Financials (PCAF) *Global GHG Accounting and Reporting Standard for the Financial Industry* (November 2020), the Scope 3 emissions of the non-managed operations have been reported separately to the Scope 1 and 2 emissions from these operations above.

Due to the absence of data on the liabilities and the financial arrangements between Anglo American and these non-managed operations, the approach for consolidation based on equity share without considering further financial arrangements is considered simplistic but aligns with the recommendations of the GHG Protocol Standard.

Where primary Scope 1 and Scope 2 emissions data for non-managed operations was available (i.e., the direct and indirect emissions associated with the purchase of electricity, steam, heat, or cooling for that entity/operation, relative to these operations), the FY2020 reported emissions for these operations was multiplied by the percentage equity held by the company to yield emissions attributable to Investments.

Where no reported Scope 1 and Scope 2 emissions were found through outreach or in research, an emissions proxy was applied, computed as available emissions intensity data from a company producing the same material as the operation in question to yield a useable emissions per unit produced. This emissions factor was multiplied by the mass of material produced by the company's operation in question.

For Scope 3 for non-managed operations (i.e., indirect emissions not otherwise accounted and arising from activities up- and downstream of these non-managed operations), the emissions intensities for the owned and managed operations were used as proxies to determine these extended boundary emissions of the non-managed investments, wherever possible. These Scope 3 emissions proxies were then multiplied by the volume of product sold in the 2020 period by the non-managed asset. This has been done for Diamonds, Metallurgical Coal, PGMs, and Copper business units to obtain proxies for the Debswana, Namdeb Holdings, Jellinbah, Modikwa, Kroondal, and Collahuasi non-managed operations.

De Beers non-managed operations: the computations for Scope 3 Category 15 emissions regarding De Beers non-managed operations is confined to an estimation of mining related emissions and upstream emissions relevant to those non-managed operations. The downstream value chains of these non-managed operations are substantially integrated into De Beers Group and therefore already accounted for Diamond in other Scope 3 Categories. and only a relatively non-material proportion of product is routed through other channels and therefore not captured. A more accurate approach to data for De Beers Group non-managed operations is underway as a separate exercise and may be integrated to Anglo American Group reporting in subsequent periods; however, it is anticipated to be a relatively non-material enhancement in accuracy and completeness.

Jellinbah: for all upstream Scope 3 Categories and Category 9, the proxy data from the Metallurgical Coal business unit was used against the attributable product volume from Jellinbah. For Categories 10, 11 and 12, however, the methodologies for the managed Metallurgical Coal operations were followed.

Meaning that for Category 10 and 11 for Jellinbah, the equity share of Metallurgical Coal sold was converted into crude steel equivalent using industry average mass apportionment factors and an industry average BF-BOF emissions factor applied. The total emissions resulting from this calculation were then apportioned to the Jellinbah operation using the 66%:34% Iron Ore to metallurgical coal ratio, meaning that 34% of these are attributable to Jellinbah.

As with the managed Metallurgical Coal operations, 18% (representing the weighted average emissions from coking relative to the total steelmaking emissions) of the steelmaking emissions were assigned to Category 10, with the balance to Category 11.

Samancor (Manganese): due to the fact that there were no managed Manganese operations, only the material emissions for Samancor operations were estimated. These material emissions include the Scope 1 and 2 (i.e., the direct and indirect emissions associated with the purchase of electricity, steam, heat, or cooling for that entity/operation, relative to these operations) and the smelting of Manganese Ore into intermediate products for use in various alloys and metals products. The volume of Manganese products sold in 2020 were multiplied by the calculated emissions factor proxy (0.33 tCO_2e/tonne) and the smelting emissions factor proxy (0.51 tCO_2e/tonne) (South32, 2020) to yield the material emissions for these operations.

Ports: a proxy was applied based on Transnet's estimated energy and diesel consumption for 2018, applying energy spend figure from their annual report (Transnet, 2018) for which an update was not available. These emissions from energy consumption were divided by their tonnage handled in 2018 to yield an emissions factor per unit mass handled, using South African diesel and electricity price averages (SAPIA, 2019) (Eskom, 2018). The emissions computed for the Dalrymple Port are only the Scope 1 and 2 emissions (i.e., the direct and

indirect emissions associated with the purchase of electricity, steam, heat, or cooling for that entity/operation, relative to these operations), using the above mentioned proxy, as data regarding the Scope 3 emissions for port facilities were uncertain and considered likely to be non-material.

Allocations and Key Assumptions

Ports: it was assumed that diesel accounted for 68% of port energy consumption and electricity accounted for 32% of port energy consumption (UNECLAC, 2016).

It was assumed that all of the product volume coming from Collahuasi was Copper Concentrate and was processed into rolled copper sheets.

Lastly, it was assumed that the non-managed operations would achieve comparable emissions performance to the managed operations, where proxies were used, and to industry averages, where industry average emissions factors were used.

References

Ampofo-Anti, N., Dumani, N. & Van Wyk, L., 2015. *Potential for reducing greenhouse gas emissions in the South African construction sector,* Research Report: DBSA Green Fund.
Anglo American, 2020. *2020 Annual Report,* Johannesburg: Anglo American.
BEIS UK, 2020. *Greenhouse Gas Reporting: Conversion Factors.* [Online]
Available at: https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020
CDP, 2019. *Lonmin - Climate Change 2018.* [Online]
Available at:
https://www.cdp.net/en/formatted_responses/responses?campaign_id=62255737&discloser_id=740386&locale=en&organization_name=Lonmin&organization_number=10882&program=Investor&project_year=2018&redirect=https%3A%2F%2Fcdp.credit360.com%2Fsurveys%2Fft9rgfbw%2F2
Eco-Invent, 2016. *Eco-Invent Database.* [Online]
Available at: https://www.ecoinvent.org/database/database.html
Eskom, 2018. *Integrated Report,* s.l.: Eskom Holdings SOC.
Greenhouse Gas Protocol, 2013a. *Required Greenhouse Gases in Inventories,* s.l.: World Resource Institute & WBCSD.
Greenhouse Gas Protocol, 2013b. *Technical Guidance for Calculating Scope 3 Emissions (v.10),* s.l.: World Resources Institute & WBCSD.
Greenhouse Gas Protocol, 2013. *Corporate Value Chain (Scope 3) Accounting and Reporting Standard,* s.l.: World Resource Institute & WBCSD.
Hao, H. et al., 2017. GHG Emissions from the Production of Lithium-Ion Batteries for Electric Vehicles in China. *Sustainability,* 9(4), p. 504.
Henckens, M., Driessen, P. & Worrell, E., 2018. Molybdenum resources: their depletion and safeguarding for future generations. *Resources, Conservation and Recycling,* pp. 61-69.
HSBC, 2019. *Steel for the Future: The transition to responsible, zero carbon steel making,* s.l.: HSBC Centre of Sustainable Finance.
International Stainless Steel Forum, 2015. *Stainless Steel and CO2: Facts and Scientific Observations,* s.l.: ISSF.
IPCC, 2006. *IPCC EFDB.* [Online]
Available at: https://www.ipcc-nggip.iges.or.jp/EFDB/find_ef.php
Johnson Matthey, 2018. *Annual Report and Accounts,* s.l.: Johnson Matthey PLC.
Mahlaba, J., Kearsley, E. & Kruger, R., 2011. Physical, chemical and mineralogical characterisation of hydraulically disposed fine coal ash from Sasol Synfuels. *Fuel.*
Material Economics, 2018. *The Circular Economy: A Powerful Force for Climate Mitigation,* s.l.: SITRA, European Climate Foundation.
Quantis, 2021. *GHG Protocol Scope 3 Evaluator.* [Online]
Available at: https://quantis-suite.com/Scope-3-Evaluator/
SAPIA, 2019. *Old Fuel Prices.* [Online]
Available at: https://www.sapia.org.za/Overview/Old-fuel-prices
South32, 2020. *Annual Report,* s.l.: South32.
South32, 2021. *2020 Annual Report,* s.l.: South32.
Thyssen Krupp, 2019. *Stainless Steel Composition.* [Online]
Available at: https://www.thyssenkrupp-materials.co.uk/stainless-steel-composition.html
Tractebel, 2019. *Actualización de huella de carbono por producto año 2018,* s.l.: Tractebel Engie.
Transnet, 2018. *Port Terminals,* s.l.: Transnet.
UNECLAC, 2016. Energy consumption and container terminal efficiency. *FAL Bulletin*, Issue 350.
UNEP, 2011. *Recycling Ratess of Metals: A status report,* s.l.: United Nations Environmental Programme.
Weidema, B. & Wesnaes, M., 1996. Data quality management for life cycle inventories - an example of using data quality indicators. *Journal of Cleaner Production,* Volume 4, pp. 167-174.
World Steel, 2018. *Steel Facts,* s.l.: World Steel Association.

World Steel, 2019. *Raw Materials,* s.l.: World Steel association.
World Steel, 2019. *Steel in Automotive.* [Online]
Available at: https://www.worldsteel.org/steel-by-topic/steel-markets/automotive.html#targetText=The%20steel%20in%20a%20vehicle,for%20the%20wear%20resistant%20gears.
World Steel, 2020. *Our Indicators,* s.l.: World Steel Association.
WorldSteel, 2019. *Steel's contribution to a low carbon future and climate resilience societies - worldsteel position paper,* Calgary, Canada.: World Steel Association.
WSP Parsons Brinckerhoff, 2015. *Industrial Decarbonisation & Energy Efficiency Roadmaps,* s.l.: Department of Energy and Climate Change.

Appendices

Appendix 1: Glossary of terms and abbreviations

Activity Data	Figures representative of the company's level of activity for a particular operation in the year under review. This could include mass of product produced, volume of fuels purchased, number of employees commuting etc. as relevant. The suitable emissions figures are applied to these activity data to yield a representative amount of greenhouse gas emissions for that activity for the given reporting period.
AUS	Australia
BF-BOF	Blast furnace to basic oxygen furnace
Capital Goods	Final goods that are purchased by the company that have a lifespan of longer than a year and are used for the production, processing and sale of goods and services by the company. This includes plant, property, and equipment.
Carat	A unit of mass equal to 200 mg or 0.2 grams used to measure gemstones and pearls, pertinent to diamonds in the context of this report.
Cradle-to-Gate	Emissions that are attributable to a product or activity that include lifecycle emissions associated with production and logistics up to the point of receipt by the company.
C&M	Closure and maintenance
Coal AUS	Bulk commodity business producing and selling (in international markets) predominantly metallurgical quality coal principally for the Iron & Steel Industry, as well as thermal coal for heat and steam in industries, and power generation applications. Operations are Australia based.
Coal SA	Bulk commodity business producing and selling (in domestic and international markets) thermal coal of varying grades, principally for heat and steam in industries, and power generation applications. Operations are South Africa based.
CDP	A global disclosure and transparency programme and reporting platform, previously known as the Climate Disclosure Project.
DRI-EAF	Direct reduction iron to electric arc furnace
Emissions Factor	A figure representing the greenhouse gas emissions for a specified quantity of applicable activity data that is used to convert the activity data into a representative amount of greenhouse gas emissions for that activity data.
Gate-to-Grave	Emissions that occur downstream from the company from the point of sale of the good up to and including the end-of-life treatment of that good.
GHG	Greenhouse gases accounted for in this report are the seven main gases covered by the UNFCCC/Kyoto Protocol as defined in GHG Protocol, as amended: carbon dioxide (CO_2); methane (CH_4); nitrous oxide (N_2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); sulphur hexafluoride (SF_6); and nitrogen trifluoride (NF_3).
GHG Protocol	Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard Supplement to the GHG Protocol Corporate Accounting and Reporting Standard, Copyright of World Resources Institute and World Business Council for Sustainable Development, September 2011 [accessed at https://ghgprotocol.org/sites/default/files/standards/Corporate-Value-Chain-Accounting-Reporing-Standard_041613_2.pdf].

GWP	Global Warming Potential: a factor applied to the greenhouse gases such as nitrous oxide (N_2O), methane (CH4), hydrofluorocarbons, perfluorocarbons, and sulphur hexafluoride.
IPCC	Intergovernmental Panel on Climate Change.
JV	Joint venture.
KIO	Kumba Iron Ore.
IOB	Iron Ore Brazil
Materiality	Activities and resulting emissions that are deemed to have a significant impact on the overall results of the Scope 3 model. Immaterial activities or emissions are those that are anticipated to have negligible impacts on the company's emissions profile.
Ounce	A unit of mass equal to 31.103 grams, pertinent to PGMs in the context of this report.
PGMs	Platinum Group Metals being predominantly platinum, palladium, and rhodium.
Primary Data	Data either directly from the company or from company suppliers or customers. Primary emissions data refers to Scope 1 and Scope 2 emissions obtained directly from the company's suppliers or customers for use as an emissions factor. Primary activity data is data that has been obtained directly from the company for use in this model.
Proxy	A proxy is where no available data, activity and/or emissions factors, is available and a representative substitute is used to give an estimation for the emissions for that activity instead of excluding the activity entirely.
Scope 1	Direct emissions from owned or controlled sources, as defined by the GHG Protocol.
Scope 2	Indirect emissions from the generation of purchased energy consumed by the reporting company), as defined by the GHG Protocol.
Scope 3	All other indirect emissions other than Scope 3, that occur in a company's value chain, as defined by the GHG Protocol.
Secondary Data	Emissions and/or activity data that has been obtained from a third party or from a source that represents industry averages for that activity. Secondary data is less preferred but often more attainable than primary data, and as such has been used only in the absence of primary data.
tCO_2e	Metric tonnes of carbon dioxide equivalent. The equivalent here means that the GWP of the various greenhouse gases have been converted to represent the radiative forcing in carbon dioxide equivalent.
UNFCCC	United Nations Framework Convention on Climate Change.
WBCSD	World Business Council for Sustainable Development.
WRI	World Resources Institute.