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CASTROL

PAS 2060 Qualifying Explanatory Statement

1st Application Period: January – December 2021

This is a PAS2060 Qualifying Explanatory Statement to demonstrate that Castrol Ltd has committed to carbon neutral in accordance with PAS2060:2014 reporting

Carbon Neutrality Declaration

“Carbon neutrality of Scope 1 and Scope 2 GHG Emissions will be achieved by Castrol in accordance with PAS 2060 at 31st December 2021 for the period commencing 1st January 2021, DNV certified”

Rachel Bradley

Riccardo Tavoletti

Rachel Bradley, 30 Sept 2021

Riccardo Tavoletti, 30 Sept 2021

Global Sustainability Manager,
C&P – Castrol

VP Global Supply Chain,
C&P - Castrol

This Qualifying Explanatory Statement (QES) contains all the required information on the carbon neutrality of the given subject. All information provided within this report has been reviewed by a third party and is believed to be correct. If provided with any information affecting the validity of the following statements, this document will be updated accordingly to reflect Castrol’s current status towards carbon neutrality. This report will be made publicly available on Castrol’s carbon neutral webpage: www.castrol.com/cneutral.

This is Castrol’s first declaration of commitment to carbon neutrality for Scope 1 & 2 GHG emissions.

Castrol’s carbon neutrality declaration has been reviewed and verified by an independent third party, DNV. Their Assurance Statement can be found in Annex B of this report.

1. TERMS & DEFINITIONS

100-year Global Warming Potential	Figures by the IPCC to account for the global warming potential of GHG emissions
Carbon	Carbon is used as shorthand for aggregated greenhouse gas (GHG) emissions, reported as carbon dioxide equivalents (CO ₂ e). Throughout the report, the full term (CO ₂ e) is employed. A full list of GHG emissions included in the inventory is provided in Annex C of this report
GHG	Greenhouse Gas refers to carbon dioxide (CO ₂), methane (CH ₄), nitrous oxide (N ₂ O), sulphur hexafluoride (SF ₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). A full list of GHG emissions included in the inventory is provided in Annex C of this report
GHGP	Greenhouse Gas Protocol sets the standards to measure and report GHG emissions
GHGP Corporate Standard	Greenhouse Gas Protocol Corporate Standard: https://ghgprotocol.org/corporate-standard .
IPCC Fifth Assessment Report	The Intergovernmental Panel on Climate Change (IPCC) provides an international statement on the scientific understanding of climate change
I3P-1 (for third party)	The conformity assessment type as outlined in PAS2060, in this case: Independent 3P certification conformity assessment
PAS 2060	Publicly available Specification for the Demonstration of Carbon Neutrality. PAS 2060:14 (referenced in this document) refers to the latest 2014 version of the document
QES	The Qualifying Explanatory Statement (QES) contains all the required information on the carbon neutrality of the given subject.

2. INTRODUCTION

2.1 Foreword

This Qualifying Explanatory Statement (QES) demonstrates Castrol's commitment to achieve carbon neutrality of its Scope 1 & 2 GHG emissions at 31st December 2021 in accordance with PAS 2060.

This QES provides details on Castrol's Scope 1 & 2 carbon footprint and how it was calculated, and Castrol's carbon management plan inclusive of emission reduction initiatives and the carbon offset process which will be used to achieve carbon neutrality.

A checklist of requirements to demonstrate conformance to PAS 2060 and their respective location within the QES can be found in Annex A.

Table 2.1 - General Information

PAS 2060 Information Requirement	Information as it relates to Castrol Ltd
Entity making PAS 2060 declaration	Castrol Limited (hereafter "Castrol")
Individual responsible for the evaluation and provision of data necessary for the substantiation of the declaration including that of preparing, substantiating, communicating, and maintaining the declaration	Carolyn Bongard, Sustainability Accounting Manager
Subject of the declaration	Scope 1+ 2 GHG emissions across Castrol's Global Operations
Chosen consolidation approach (equity share, operational control, or financial control)	Operational Control
Characteristics of the subject	Castrol is a global lubricants manufacturing and marketing company offering a wide range of products and services across the automotive, industrial, marine and energy spaces.
Rationale for the selection of the subject and boundary	Castrol is making its Scope 1 and 2 GHG emissions carbon neutral in support of its recently launched PATH360 Sustainability Strategy. Castrol first determined its baseline Scope 1, 2 and 3 GHG emissions in 2020, but is excluding Scope 3 from carbon neutrality due to its practicality. Within a separate QES, Castrol will be demonstrating its commitment to carbon neutrality over a significant portion of its Scope 3 emissions

	through its carbon neutral products programme.
Conformity assessment type	I3P-1 Independent third-party certification – unified
Baseline date (Date of first determined footprint)	1 st Jan – 31 st Dec 2019
Commitment period for carbon neutrality	1st Jan – 31 st Dec 2021

2.2 Boundaries of the Subject

This carbon neutrality commitment includes activities across all of Castrol’s owned / controlled manufacturing facilities, one owned office location (Castrol’s headquarters in the UK) and the fleet of leased light vehicles used by the sales force to service Castrol customers globally.

Castrol conducted its first corporate footprint (Scope 1, 2 and 3 GHG emissions) in 2020 using calendar year 2019 as the baseline period. This assessment of its full corporate value chain emissions helped inform Castrol’s recently launched PATH360 Sustainability Strategy and its aim to halve the net carbon intensity of the products it sells by 2030 or sooner. In a separate and forth-coming QES and carbon neutrality declaration, Castrol will demonstrate its commitment to carbon neutrality over a significant portion of its products sold and the related Scope 3 GHG emissions for those products. Within this QES, Castrol is focusing on the emissions within its operational control and the associated carbon reduction activities which will help to underpin its 2030 aim. In 2021, Castrol has limited the update of the GHG accounting to Scope 1 and 2 emissions, and for this QES and carbon neutrality declaration, Scope 3 has been excluded.

2.3 PAS 2060 Carbon Neutrality

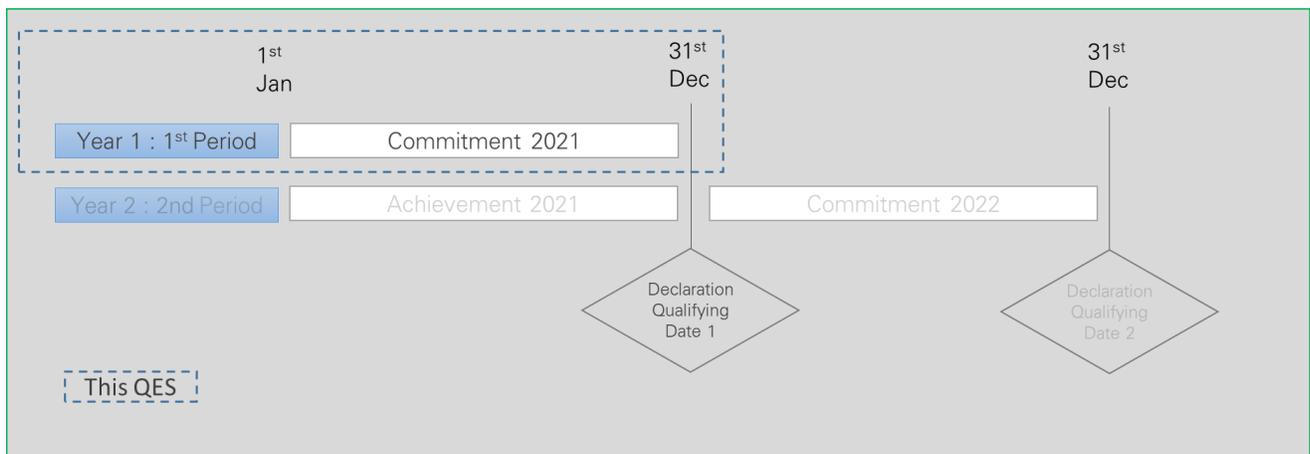
Castrol will demonstrate carbon neutrality as set out in PAS 2060:2014 using an independent 3rd party certification in accordance with 10.3.2. For the application period following the baseline date, declaration I3P-1 from Annex A shall be used. For the second and all subsequent periods with an unchanged subject, declaration I3P-3 modified as per A.2 shall be used.

Castrol is following the timeline for carbon neutrality in accordance to figure 2.1 carbon neutrality declaration periods. This is Castrol’s first application for Scope 1 & 2 carbon neutrality. The timing of the carbon neutrality of Scope 1 & 2 (2021) aligns with the launch of Castrol’s PATH360 Sustainability Strategy. The first calculation of the corporate footprint was conducted in 2020 (based on 2019 data) to help Castrol establish its carbon reduction aims and identify its carbon reduction levers. The baseline period corresponds to calendar year 2019 and the subject has been defined and its carbon footprint quantified. The QES is officially released to the public after third party assurance of Castrol’s carbon neutral program. This QES will be

updated accordingly to reflect any changes and actions that could affect the validity of the declaration of commitment

A carbon management plan has been initiated to target carbon reduction activities within Castrol's defined boundaries, where the business is able to have direct influence over the carbon emissions.

Figure 2.1 – Carbon Neutral Declaration Periods



3. QUANTIFICATION OF CARBON FOOTPRINT

3.1 Standard Chosen and Emissions Sources

Castrol has accounted its GHG emissions as per the GHG Protocol Corporate Standard; the most widely used accounting platform for corporate GHG reporting programs globally. The GHG Protocol Corporate Standard was applied in accordance with its provisions and the principles set out in PAS 2060. The boundary for the subject has been defined as 'operational control'.

GHG emissions accounted for in the study are based on the 100-year Global Warming Potential figures published in Table 2.14 of the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (2014) and include those required by the GHG Protocol Corporate Standard which specifies emissions to and removals from the atmosphere of: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulphur hexafluoride (SF₆), perfluorocarbons (PFCs), and hydrofluorocarbons (HFCs). A full list of GHG emissions included in the inventory is provided in Annex C of this report.

All Scope 1 and 2 emissions for calendar years 2019 and 2020 are summarized in Table 3.1. As this QES is a commitment to carbon neutrality, this data will be replaced with calendar year 2021 data in the next QES application for carbon neutral achievement. Where GHG emissions have been estimated, these have been determined based on a conservative approach that precludes underestimation. Sources of biogenic carbon in Castrol's Scope 2 emissions are limited to 956 tCO₂e and are not included in the boundary of Castrol's Scope 1 and Scope 2 GHG emissions.

Emissions for Scope 1 fuels and Scope 2 steam were calculated using emission factors sourced from DEFRA 2019 and DEFRA 2020. With limited exception, Scope 2 electricity emission factors were sourced from IEA 2019 (2017 figures) - CO₂, CH₄ and N₂O + Trade induced and IEA 2020 (2018 figures) - CO₂, CH₄ and N₂O + Trade induced. Two manufacturing sites in Neudorf, Austria and Port Allen, Louisiana USA have used a market-based approach with the electricity energy mix provided by the supplier. The energy mix for both sites was collected in 2020 and used for both 2019 and 2020 emissions calculations.

Table 3.1 – Inclusions & Exclusions

Scope 1	<p>Included:</p> <ul style="list-style-type: none"> ○ Direct emissions from combustion of fuels occurring at Castrol-owned sites. ○ Emissions from combustion of fuels in vehicles leased by Castrol. <p>Excluded:</p> <ul style="list-style-type: none"> ○ Direct emission of refrigerants from Castrol-owned sites. Data is not currently available. Investigations ongoing into significance of these emissions but expected to be immaterial.
Scope 2	<p>Included:</p> <ul style="list-style-type: none"> ○ Indirect emissions associated with the purchase of energy for Castrol-owned sites (i.e., electricity and steam).
Scope 3	<p>Excluded:</p> <ul style="list-style-type: none"> ○ Scope 3 emissions. All Scope 3 emissions have been excluded from carbon neutrality due to its practicality. Within a separate QES, Castrol will be demonstrating its commitment to carbon neutrality over a significant portion of its Scope 3 emissions through its carbon neutral products programme.

Table 3.2 – Carbon Footprint for Carbon Neutrality

PAS 2060 Requirement	Castrol Response	
	2019 Baseline	2020 Reference
Standard used	The GHG Protocol Corporate Accounting and Reporting Standard	
Emissions covered	Scope 1 and 2	
Scope 1 (tCO ₂ e) ¹	[REDACTED]	
Scope 2 (tCO ₂ e) ²		
Total (tCO₂e)		

¹ Direct stationary emissions from fuel used in boilers and furnaces, mobile emissions from leased light vehicles. Fugitive emissions from refrigerants being pursued but likely immaterial.

² Indirect emissions from the use of purchased electricity, steam, heating, or cooling

4. DATA METHODS

4.1 Description of Methodologies and Data Used

Scope 1: Fuel consumption data for all Castrol operated facilities are reported in kWh or L, along with distances driven in km for the operation of leased vehicles. Castrol consumption data (e.g., litres, kWh) are multiplied with secondary emission factors for direct emissions.

Scope 2: Site electricity and steam consumption data (kWh) are collected for all facilities operated by Castrol. Castrol consumption data (e.g., kWh) are multiplied with market-based and location-based emission factors for indirect emissions. The Scope 2 emissions reported in Table 3.2 reflect a market-based approach.

4.2 Data Collection and Quality

Site data

Primary data were sourced for all included Castrol activities, comprising amount of fuels combusted at Castrol-owned sites and the amount of energy purchased for Castrol-owned sites.

Leased vehicles

Primary data were sourced for all included Castrol activities, comprising the total distance driven by vehicles Castrol leased. However, the data were not further disaggregated by either vehicle fuel type or by geography.

Data quality

All data points were assessed for data quality to appraise representativeness in relation to – technology, geography, time-period, completeness, and reliability – and assigned a score on a scale of 1 to 4 (1 being poor; 4 being very good). ERM (Castrol’s environmental consultancy partner for the development and calculation of the carbon footprint) were in constant communication with Castrol throughout the assessment, this included weekly data review meetings throughout the assessment process. All data provided by Castrol were subject to review and checked for completeness. Data clarifications were sought and promptly addressed by Castrol. All data gaps relating to Castrol operations were addressed. Castrol and ERM were prompt in responding to Critical Reviewer data queries and in implementing suggestions for improving data quality. A single data quality score was calculated as a weighted average of all four representativeness categories (applying equal weighting). The quality of the overall dataset was appraised as a percentage of the total carbon footprint result which relies on data that is appraised as ‘poor’ (weighted average score <2.5) as follows:

Table 4.1 – Data Quality Scale

% Total Footprint results from ‘poor’ data	Data Quality Category
<10%	Very good
10% to <30%	Good
30% to <50%	Satisfactory
>50%	Poor

Separate data quality assessments were undertaken for activity data and secondary emission factor data.

Table 4.2 – Data Quality Appraisal – Activity Data

Data Quality Appraisal – Activity Data	
Scope 1	Very good
Scope 2	Very good
Overall	Very good

Table 4.3 – Data Quality Appraisal – Emission Factor Data

Data Quality Appraisal – Emission Factor Data	
Scope 1	Very good
Scope 2	Very good
Overall	Very good

4.3 Data Uncertainties

4.3.1 Scenario Uncertainty

Leased Vehicles - The data collected comprised the total distance driven by the vehicles Castrol leased. However, the data were not further disaggregated by either vehicle fuel type or by geography. This meant that assumptions were made regarding both the fuel consumption and the fuel type of the leased vehicles. As a conservative estimate, the fuel type for all leased vehicles was assumed to be petrol (i.e., no diesel or electric vehicles, which would be expected to emit less). For fuel consumption, an assumption of 23.5 miles per gallon was provided by Castrol.

The leased vehicles data could be improved by disaggregating the distances by vehicle fuel type and geography. Preferably, actual fuel consumption data would be collected instead of distance.

Fuels – In 2019, some sites had consumed small amounts of diesel, but this was not captured in the data reporting template. The associated emissions have been calculated to be immaterial but have since been added to the reporting template from 2020. There was also a separate reporting issue where fuel oil consumption at one site was reported as diesel. This has also been corrected from 2020.

4.3.2 Parameter Uncertainty

Uncertainty has not been appraised as parameter uncertainty is unknown for most of the measured activity and emission factor data.

The greatest uncertainty is associated with the GWP factors for CO₂, reported to be ±26% in the IPCC Fifth Assessment Report, 2014 (AR5) referenced above and in Annex A 3.

5. CARBON MANAGEMENT PLAN

5.1 Commitment

Castrol is committed to achieve carbon neutrality of its Scope 1 + 2 GHG emissions for the period of 1st January 2021 to 31st December 2021 in accordance with PAS 2060:2014. This commitment can be broken down as follows:

- Offset actual Scope 1 + 2 GHG emissions for the commitment period in early 2022.
- Continue to implement its carbon reduction plan during the commitment period through improved measurements and additional initiatives. As part of this carbon management plan, Castrol will reassess the emissions profile at the end of the commitment period.

5.2 Carbon Reduction Plan

Castrol's carbon reduction plan is a global approach encompassing activities across Scope 1, 2 and 3 emissions in support of its aim to halve the net carbon intensity of its products sold by 2030 or sooner. Castrol is committed to reducing its Scope 1 & 2 GHG absolute emissions in alignment with both this plan and Aim 1 of bp's ambition to be a Net Zero company by 2050 or sooner. Aim 1 relates specifically to Scope 1 and 2 GHG emissions where the aim is to be net zero across bp's entire operations on an absolute basis by 2050 or sooner.

The key components of Castrol's Scope 1 + 2 carbon reduction activities include:

- Improvements in energy efficiency
 - a) Raising awareness of energy consumption and energy waste
 - b) Reviewing current energy intensive processes
 - c) Using capital expenditure to invest in energy saving solutions
- Transitioning to renewably sourced electricity where possible, using a combination of on-site installations of renewable energy (e.g., solar panels and wind turbines) and procurement of green energy through virtual purchase power agreements and green tariffs
- Replace carbon-intensive energy sources with cleaner, low carbon alternatives where commercially, technically, and practically feasible.

Castrol's carbon management plan is updated and maintained regularly as part of its Sustainability Programme execution and progress against key activities are reviewed with leadership quarterly. Performance against targets will be measured on an absolute tonnes basis and progress against initiatives requiring capital investment will be tracked using a stage gate process. Underlying energy consumption for Scope 1 + 2 emissions is also tracked on a per litre basis to account for any significant variation in volume throughput.

6. CARBON OFFSET PROGRAM

Offset program for the 1st application Period

Credits for the period covering 1st Jan 2021 – 31st Dec 2021 will be ordered through BP Target Neutral (www.bptargetneutral.com) based on 2021 Actual tCO₂e. These credits will be procured in advance, forming BP Target Neutral's Project Portfolio, and will be purchased from sources which guarantee that:

- The offsets purchased represent genuine, additional GHG emissions reductions; and
- The projects involved in delivering offsets meet the criteria of additionality, permanence, leakage, and double counting.

The purchase of offsets via these schemes also guarantees that they will have been verified by an independent third party, only issued after the emission reductions had taken place, and were retired within 12 months from the date of the declaration of the achievement. These credits will be supported by publicly available project documentation, with references provided and stored and retired in an independent and credible registry.

The exact quantity of offsets required for the commitment period are not yet fully known as they are based on estimated tonnes from 2019 and incorporate planned reductions from 2020 to 2021. This estimated figure of ████████ tonnes is built on a like for like volume profile vs 2019 but captures the Scope 2 reduction activities where 3 manufacturing sites have transitioned to renewable electricity. The exact projects from which BP Target Neutral will source the offsets is also to be confirmed, however, Castrol is committed to source its offsets from ICROA approved standards, guaranteed to fulfil PAS 2060 requirements.

Annex A: Qualifying Explanatory Statement (QES) Checklist

Table A.1 Checklist for QES supporting declaration of commitment to carbon neutrality

The following table has been extracted from PAS 2060:2014. It provides a checklist of information that should be included in the commitment to carbon neutrality, as well as identification of where this information is located.

#	Item Description	Status	Section in this QES
1	Identify the individual responsible for the evaluation and provision of data necessary for the substantiation of the declaration including that of preparing, substantiating, communicating, and maintaining the declaration.	✓	Section 2.1, Table 2.1
2	Identify the entity responsible for making the declaration.	✓	Section 2.1, Table 2.1
3	Identify the subject of the declaration.	✓	Section 2.1, Table 2.1
4	Explain the rationale for the selection of the subject. <i>(The selection of the subject should ideally be based on a broader</i>	✓	Section 2.1, Table 2.1,

	<i>understanding of the entire carbon footprint of the entity so that the carbon footprint of the selected subject can be seen in context; entities need to be able to demonstrate that they are not intentionally excluding their most significant GHG emissions (or alternatively can explain why they have done so.)</i>		Section 2.2
5	Define the boundaries of the subject.	✓	Section 2.2, Table 2.1
6	Identify all characteristics (<i>purposes, objectives, or functionality</i>) inherent to that subject.	✓	Section 2.2, Table 2.1
7	Identify and take into consideration all activities material to the fulfilment, achievement or delivery of the purposes, objectives, or functionality of the subject.	✓	Section 2.2
8	Select which of the 3 options within PAS 2060 you intend to follow.	✓	Section 2.3, Table 2.1
9	Identify the date by which the entity plans to achieve the status of 'carbon neutrality' of the subject and specify the period for which the entity intends to maintain that status.	✓	Section 2.3, Figure 2.1, Section 5.1
10	Select an appropriate standard and methodology for defining the subject, the GHG emissions associated with that subject and the calculation of the carbon footprint for the defined subject.	✓	Section 3.1
11	Provide justification for the selection of the methodology chosen. (<i>The methodology employed shall minimise uncertainty and yield accurate, consistent, and reproducible results.</i>)	✓	Section 3.1
12	Confirm that the selected methodology was applied in accordance with its provisions and the principles set out in PAS 2060.	✓	Section 3.1
13	Describe the actual types of GHG emissions, classification of emissions (<i>Scope 1, 2 or 3</i>) and size of carbon footprint of the subject exclusive of any purchases of carbon offsets:	✓	Section 3.1, Table 3.1, Table 3.2
	<i>a) All greenhouse gases shall be included and converted to tCO₂e.</i>	✓	Section 3.1, Table 3.2
	<i>b) 100% Scope 1 (direct) emissions relevant to the subject shall be included when determining the carbon footprint.</i>	✓	Section 3.1, Table 3.1, Table 3.2
	<i>c) 100% Scope 2 (indirect) emissions relevant to the subject shall be included with determining the carbon footprint.</i>	✓	Section 3.1, Table 3.1, Table 3.2
	<i>d) Where estimates of GHG emissions are used in the quantification of the subject carbon footprint (particularly when associated with Scope 3 emissions) these shall be determined in a manner that precludes underestimation.</i>	✓	Section 3.1
	<i>e) Scope 1, 2 or 3 emission sources estimated to be more than 1% of the total carbon footprint shall be taken into consideration unless evidence can be provided to demonstrate that such quantification would not be technically feasible or cost effective. (Emissions sources estimated to constitute less than 1% may be excluded on that basis alone.)</i>	✓	Table 3.1

	f) <i>The quantified carbon footprint shall cover at least 95% of the emissions from the subject.</i>	✓	Section 3.1, Table 3.2, Section 2.2
	g) <i>Where a single source contributes more than 50% of the total emissions, the 95% threshold applies to the remaining sources of emissions.</i>	N/A	
	h) <i>Any exclusion and the reason for that exclusion shall be documented.</i>	✓	Section 3.1, Table 3.1
14	Where the subject is an organisation/ company or part thereof, ensure that:		
	a) <i>Boundaries are a true and fair representation of the organisation's GHG emissions (i.e., shall include GHG emissions relating to core operations including subsidiaries owned and operated by the organisation). It will be important to ensure claims are credible – so if an entity chooses a very narrow subject and excludes its carbon intensive activities or it if outsources its carbon intensive activities, then this needs to be documented.</i>	✓	Section 2.2
	b) <i>Either the equity share or control approach has been used to define which GHG emissions are included. Under the equity share approach, the entity accounts for GHG emissions from the subject according to its share of equity in the subject. Under the control approach, the entity shall account for 100% of the GHG emissions over which it has financial and/or operational control.</i>	✓	Table 2.1, Section 2.2, Section 3.1
15	Identify if the subject is part of an organisation or a specific site or location and treat as a discrete operation with its own purpose, objectives, and functionality.	✓	Section 2.2
16	Where the subject is a product of service, include all Scope 3 emissions <i>(as the life cycle of the product/ service needs to be taken into consideration).</i>	N/A	
17	Describe the actual methods used to quantify GHG emissions <i>(e.g., use of primary or secondary data)</i> , the measurement unit(s) applied, the period of application and the size of the resulting carbon footprint. <i>(The carbon footprint shall be based as far as possible on primary activity data.)</i> Where quantification is based on calculations <i>(e.g., GHG activity data multiplied by greenhouse gas emission factors or the use of mass balance/ life cycle models)</i> then GHG emissions shall be calculated using emissions factors from national <i>(Government)</i> publications. Where such factors are not available, international or industry guidelines shall be used. In all cases the sources of such data shall be identified.	✓	Page 2, Section 2.1, Table 2.1, Figure 2.1, Section 3.1, Table 3.1, Table 3.2, Section 4.1, Section 4.2
18	Provide details of, and explanation for, the exclusion of any Scope 3 emissions.	✓	Section 2.2, Table 2.1, Table 3.1
19	Document all assumptions and calculations made in quantifying GHG emissions and in the selection or development of greenhouse gas emissions factors. <i>(Emission factors used shall be appropriate to the activity concerned and current at the time of quantification.)</i>	✓	Section 3.1, Section 4.1, Section 4.2, Section 4.3
20	Document your assessments of uncertainty and variability associated with defining boundaries and quantifying GHG emissions including the positive tolerances adopted in association with emissions estimates. <i>(The statement could</i>	✓	Section 4.2, Section 4.3

	<i>take the form of a qualitative description regarding the uncertainty of the results, or a quantitative assessment of uncertainty if available (e.g., carbon footprint based on 95% of likely greenhouse gas emissions; primary sources are subject to variation over time; footprint is best estimate based on reasonable costs of evaluation)).</i>		
21	Document Carbon Footprint Management Plan:		
	<i>a) Make a statement of commitment to carbon neutrality for the defined subject.</i>	✓	Section 5.1
	<i>b) Set timescales for achieving carbon neutrality for the defined subject.</i>	✓	Section 5.1
	<i>c) Specify targets for GHG reduction for the defined subject appropriate to the timescale for achieving carbon neutrality including the baseline date, the first qualification date and the first application period.</i>	✓	Section 5.2
	<i>d) Document the planned means of achieving and maintaining GHG emissions reductions including assumptions made and any justification of the techniques and measures to be employed to reduce GHG emissions.</i>	✓	Section 5.2
	<i>e) Specify the offset strategy including an estimate of the quantity of GHG emissions to be offset, the nature of the offsets and the likely number and type of credits.</i>	✓	Section 6, Section 6.1
22	Implement a process for undertaking periodic assessments of performance against the Plan and for implementing corrective action to ensure targets are achieved. The frequency of assessing performance against the Plan should be commensurate with the timescale for achieving carbon neutrality.	✓	Section 5.2
23	Where the subject is a non-recurring event, such as weddings or a concert, identify ways of reducing GHG emissions to the maximum extent commensurate with enabling the event to meet its intended objectives before the event takes place and include 'post event review' to determine whether the expected minimisation in emissions has been achieved.	N/A	
24	Any reductions in the GHG emissions from the defined subject delivered in the three years prior to the baseline date and not otherwise considered in any GHG emissions quantification have been made in accordance with this PAS.	N/A	
25	Record the number of times that the declaration of commitment has been renewed without declaration of achievement.	✓	This is the first declaration of commitment without a declaration of achievement
26	Specify the type of conformity assessment:		
	<i>a) independent third-party certification</i>	✓	Section 2.1, Table 2.1
	<i>b) other party validation</i>	N/A	
	<i>c) self-validation</i>	N/A	
27	Include statements of validation where declarations of commitment to carbon neutrality are validated by a third-party certifier or second party organisations.	✓	Annex B

28	Date the QES and have signed by the senior representative of the entity concerned (e.g., CEO of a corporation; Divisional Director, where the subject is a division of a larger entity; the Chairman of a town council or the head of the household for a family group).	✓	Page 2
29	Make the QES publicly available and provide a reference to any freely accessible information upon which substantiation depends (e.g., via websites).	✓	A redacted version of the QES will be made publicly available
30	Update the QES to reflect changes and actions that could affect the validity of the declaration of commitment to carbon neutrality.	✓	A commitment has been made by the business to do this

Annex B: Carbon Neutrality Assurance Statement



WHEN TRUST MATTERS

Independent Limited Assurance Report to the Management of Castrol (U.K.) Limited

DNV Business Assurance Services UK Limited (“DNV”, “us” or “we”) were commissioned by Castrol (U.K.) Limited to provide limited assurance to Castrol Limited (“Castrol”) over the declaration of commitment to carbon neutrality in the Qualifying Explanatory Statement (the “Report”) for the Scope 1 and 2 greenhouse gas (GHG) emissions for the commitment period ending 31 December 2021.



Our Conclusion: Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Report is not fairly stated and has not been prepared, in all material respects, in accordance with the Criteria. This conclusion relates only to the Report, and is to be read in the context of this Independent Limited Assurance Report, in particular the inherent limitations explained below.

Scope of work

The scope and boundary of our work is restricted to assessing that Castrol’s preparation of the declaration of commitment to carbon neutrality presented in the Report, is in accordance with the Publicly Available Specification (PAS) 2060:2014 Demonstration of Carbon Neutrality (the “Criteria”).

The subject of the declaration of commitment is Castrol’s Scope 1 and 2 GHG emissions.

We have not performed any work, and do not express any conclusion, on any other information that may be published outside of the Report and/or on Castrol’s website for the current reporting period or for previous periods. Our work also excluded assessing the reliability of the inputs of the carbon footprint model.

Basis of our conclusion

We are required to plan and perform our work in order to consider the risk of material misstatement of the Report; our work included, but was not restricted to:

- Conducting interviews with Castrol’s management to obtain an understanding of the key processes, systems and controls in place to generate and produce the content of the Report;
- Conducting interviews with the third party in charge of maintaining and updating the carbon footprint model, used in the production of the Report;
- Assessing whether the standards and methodologies used in the carbon footprint model met the Criteria;
- Performing limited substantive testing of the carbon footprint model to check that its data and underlying assumptions had been appropriately measured, recorded and reported; and
- Reviewing that the evidence, calculations and the context provided in the Report is prepared in line with the Criteria.

Our competence, independence and quality control	Inherent limitations
<p>DNV’s policies and procedures are designed to ensure that DNV, its personnel and others where applicable, are subject to independence requirements (including personnel of other entities of DNV) and maintain independence where necessary by relevant ethical requirements. This engagement was carried out by an independent team of sustainability assurance professionals. DNV holds other contracts with Castrol, none of which conflict with the scope of this work. Our multi-disciplinary team consisted of professionals with a combination of environmental and sustainability assurance experience.</p>	<p>All assurance engagements are subject to inherent limitations as selective testing (sampling) may not detect errors, fraud or other irregularities. Non-financial data may be subject to greater inherent uncertainty than financial data, given the nature and methods used for calculating, estimating and determining such data. The selection of different, but acceptable, measurement techniques may result in different quantifications between different entities. Our assurance relies on the premise that the data and information provided to us by Castrol have been provided in good faith. DNV expressly disclaims any liability or co-responsibility for any decision a person or an entity may make based on this Independent Limited Assurance Report.</p>



WHEN TRUST MATTERS

Standard and level of assurance

We performed a **limited** assurance engagement in accordance with the International Standard on Assurance Engagements (ISAE) 3000 revised – ‘Assurance Engagements other than Audits and Reviews of Historical Financial Information’ (revised), issued by the International Auditing and Assurance Standards Board. This standard requires that we comply with ethical requirements and plan and perform the assurance engagement to obtain limited assurance.

DNV applies its own management standards and compliance policies for quality control, in accordance with ISO/IEC 17021:2015 - Conformity Assessment Requirements for bodies providing audit and certification of management systems, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement; and the level of assurance obtained is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed. We planned and performed our work to obtain the evidence we considered sufficient to provide a basis for our opinion, so that the risk of this conclusion being in error is reduced but not reduced to very low.

Responsibilities of Castrol's Management and DNV

The Management of Castrol have sole responsibility for:

- Preparing and presenting the Report in accordance with the Criteria;
- Designing, implementing and maintaining effective internal controls over the information and data, resulting in the preparation of the Report that is free from material misstatements;
- Measuring and reporting the Report's data based on the established Criteria; and
- Contents and statements contained within the Report.

Our responsibility is to plan and perform our work to obtain limited assurance about whether the Report has been prepared in accordance with the Criteria and to report to Castrol in the form of an Independent Limited Assurance Report, based on the work performed and the evidence obtained. We have not been responsible for the preparation of the Report.

DNV Business Assurance Services UK Limited

London, UK
17 September 2021



DNV Business Assurance

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DNV - Assurance Report for Castrol's

Annex C: Included GHG Emissions

Table C.1 Global warming potential (GWP) values relative to CO₂

The following table includes the 100-year time horizon global warming potentials (GWP) relative to CO₂, which have been used for the carbon footprint assessment of the subject. This table is adapted from the IPCC Fifth Assessment Report, 2014 (AR5). For more information, please see the IPCC website (www.ipcc.ch).

Industrial designation or common name	Chemical formula	GWP values for 100-year time horizon Fifth Assessment Report (AR5)	
Carbon dioxide	CO ₂	1	kg CO ₂ -eq per kg
Methane	CH ₄	28	kg CO ₂ -eq per kg
Nitrous oxide	N ₂ O	165	kg CO ₂ -eq per kg
Substances controlled by the Montreal Protocol			
CFC-11	CCl ₃ F	4,660	kg CO ₂ -eq per kg
CFC-12	CCl ₂ F ₂	10,200	kg CO ₂ -eq per kg
CFC-13	CClF ₃	13,900	kg CO ₂ -eq per kg
CFC-113	CCl ₂ FCClF ₂	5,820	kg CO ₂ -eq per kg
CFC-114	CClF ₂ CClF ₂	8,590	kg CO ₂ -eq per kg
CFC-115	CClF ₂ CF ₃	7,670	kg CO ₂ -eq per kg
Halon-1301	CBrF ₃	6,290	kg CO ₂ -eq per kg
Halon-1211	CBrClF ₂	1,750	kg CO ₂ -eq per kg
Halon-2402	CBrF ₂ CBrF ₂	1,470	kg CO ₂ -eq per kg
Carbon tetrachloride	CCl ₄	1,730	kg CO ₂ -eq per kg
Methyl bromide	CH ₃ Br	2	kg CO ₂ -eq per kg
Methyl chloroform	CH ₃ CCl ₃	160	kg CO ₂ -eq per kg
HCFC-21	CHCl ₂ F	148	kg CO ₂ -eq per kg
HCFC-22	CHClF ₂	1,760	kg CO ₂ -eq per kg
HCFC-123	CHCl ₂ CF ₃	79	kg CO ₂ -eq per kg
HCFC-124	CHClFCF ₃	527	kg CO ₂ -eq per kg
HCFC-141b	CH ₃ CCl ₂ F	782	kg CO ₂ -eq per kg
HCFC-142b	CH ₃ CClF ₂	1,980	kg CO ₂ -eq per kg
HCFC-225ca	CHCl ₂ CF ₂ CF ₃	127	kg CO ₂ -eq per kg
HCFC-225cb	CHClFCF ₂ CClF ₂	525	kg CO ₂ -eq per kg
Hydrofluorocarbons (HFCs)			
HFC-23	CHF ₃	12,400	kg CO ₂ -eq per kg
HFC-32	CH ₂ F ₂	677	kg CO ₂ -eq per kg
HFC-41	CH ₃ F ₂	116	kg CO ₂ -eq per kg
HFC-125	CHF ₂ CF ₃	3,170	kg CO ₂ -eq per kg
HFC-134	CHF ₂ CHF ₂	1,120	kg CO ₂ -eq per kg
HFC-134a	CH ₂ FCF ₃	1,300	kg CO ₂ -eq per kg
HFC-143	CH ₂ FCHF ₂	328	kg CO ₂ -eq per kg
HFC-143a	CH ₃ CF ₃	4,800	kg CO ₂ -eq per kg
HFC-152	CH ₂ FCH ₂ F	16	kg CO ₂ -eq per kg
HFC-152a	CH ₃ CHF ₂	138	kg CO ₂ -eq per kg
HFC-161	CH ₃ CH ₂ F	4	kg CO ₂ -eq per kg
HFC-227ea	CF ₃ CHFCF ₃	3,350	kg CO ₂ -eq per kg
HFC-236cb	CH ₂ FCF ₂ CF ₃	1,210	kg CO ₂ -eq per kg
HFC-236ea	CHF ₂ CHFCF ₃	1,330	kg CO ₂ -eq per kg
HFC-236fa	CF ₃ CH ₂ CF ₃	8,060	kg CO ₂ -eq per kg
HFC-245ca	CH ₂ FCF ₂ CHF ₂	716	kg CO ₂ -eq per kg
HFC-245fa	CHF ₂ CH ₂ CF ₃	858	kg CO ₂ -eq per kg
HFC-365mfc	CH ₃ CF ₂ CH ₂ CF ₃	804	kg CO ₂ -eq per kg
HFC-43-10mee	CF ₃ CHFCFCF ₂ CF ₃	1,650	kg CO ₂ -eq per kg
Perfluorinated compounds			
Sulphur hexafluoride	SF ₆	23,500	kg CO ₂ -eq per kg
Nitrogen trifluoride	NF ₃	16,100	kg CO ₂ -eq per kg

PFC-14	CF ₄	6,630	kg CO ₂ -eq per kg
PFC-116	C ₂ F ₆	11,100	kg CO ₂ -eq per kg
PFC-218	C ₃ F ₈	8,900	kg CO ₂ -eq per kg
PFC-318	c-C ₄ F ₈	9,540	kg CO ₂ -eq per kg
PFC-31-10	C ₄ F ₁₀	9,200	kg CO ₂ -eq per kg
PFC-41-12	C ₅ F ₁₂	8,550	kg CO ₂ -eq per kg
PFC-51-14	C ₆ F ₁₄	7,910	kg CO ₂ -eq per kg
PCF-91-18	C ₁₀ F ₁₈	7,190	kg CO ₂ -eq per kg
Trifluoromethyl sulphur pentafluoride	SF ₅ CF ₃	17,400	kg CO ₂ -eq per kg
Perfluorocyclopropane	c-C ₃ F ₆	9,200	kg CO ₂ -eq per kg
Fluorinated ethers			
HFE-125	CHF ₂ OCF ₃	12,400	kg CO ₂ -eq per kg
HFE-134	CHF ₂ OCHF ₂	5,560	kg CO ₂ -eq per kg
HFE-143a	CH ₃ OCF ₃	523	kg CO ₂ -eq per kg
HCFE-235da2	CHF ₂ OCF ₂ CF ₃	491	kg CO ₂ -eq per kg
HFE-245cb2	CH ₃ OCF ₂ CF ₃	645	kg CO ₂ -eq per kg
HFE-245fa2	CHF ₂ OCH ₂ CF ₃	812	kg CO ₂ -eq per kg
HFE-347mcc3	CH ₃ OCF ₂ CF ₂ CF ₃	530	kg CO ₂ -eq per kg
HFE-347pcf2	CHF ₂ CF ₂ OCH ₂ CF ₃	889	kg CO ₂ -eq per kg
HFE-356pcc3	CH ₃ OCF ₂ CF ₂ CHF ₂	413	kg CO ₂ -eq per kg
HFE-449sl (HFE-7100)	C ₄ F ₉ OCH ₃	421	kg CO ₂ -eq per kg
HFE-569sf2 (HFE-7200)	C ₄ F ₉ OC ₂ H ₅	57	kg CO ₂ -eq per kg
HFE-43-10pccc124 (H-Galden 1040x)	CHF ₂ OCF ₂ OC ₂ F ₄ OCHF ₂	2,820	kg CO ₂ -eq per kg
HFE-234ca12 (HG-10)	CHF ₂ OCF ₂ OCHF ₂	5,350	kg CO ₂ -eq per kg
HFE-338pcc13 (HG-01)	CHF ₂ OCF ₂ CF ₂ OCHF ₂	2,910	kg CO ₂ -eq per kg
HFE-227ea	CF ₃ CHFOCF ₃	6,450	kg CO ₂ -eq per kg
HFE-236ea2	CHF ₂ OCHF ₂ CF ₃	1,790	kg CO ₂ -eq per kg
HFE-236fa	CF ₃ CH ₂ OCF ₃	979	kg CO ₂ -eq per kg
HFE-245fa1	CHF ₂ CH ₂ OCF ₃	828	kg CO ₂ -eq per kg
HFE-263fb2	CF ₃ CH ₂ OCH ₃	1	kg CO ₂ -eq per kg
HFE-329mcc2	CHF ₂ CF ₂ OCF ₂ CF ₃	3,070	kg CO ₂ -eq per kg
HFE-338mcf2	CF ₃ CH ₂ OCF ₂ CF ₃	929	kg CO ₂ -eq per kg
HFE-347mcf2	CHF ₂ CH ₂ OCF ₂ CF ₃	854	kg CO ₂ -eq per kg
HFE-356mec3	CH ₃ OCF ₂ CHFCF ₃	387	kg CO ₂ -eq per kg
HFE-356pcf2	CHF ₂ CH ₂ OCF ₂ CHF ₂	719	kg CO ₂ -eq per kg
HFE-356pcf3	CHF ₂ OCH ₂ CF ₂ CHF ₂	446	kg CO ₂ -eq per kg
HFE-365mcf3	CF ₃ CF ₂ CH ₂ OCH ₃	<1	kg CO ₂ -eq per kg
HFE-374pc2	CHF ₂ CF ₂ OCH ₂ CH ₃	627	kg CO ₂ -eq per kg
Perfluoropolyethers			
PFPME	CF ₃ OCF(CF ₃)CF ₂ OCF ₂ OCF ₃	9,710	kg CO ₂ -eq per kg
Hydrocarbons and other compounds – direct effects			
Chloroform	CHCl ₃	16	kg CO ₂ -eq per kg
Methylene chloride	CH ₂ Cl ₂	9	kg CO ₂ -eq per kg
Methyl chloride	CH ₃ Cl	12	kg CO ₂ -eq per kg
Halon-1201	CHBrF ₂	376	kg CO ₂ -eq per kg

Annex D: C&P - Castrol Stakeholder Approvals

Name	Title	Date	Approved
Rachel Bradley	Global Sustainability Manager	30 Sept, 2021	Yes
Riccardo Tavoletti	VP Global Supply Chain	30 Sept, 2021	Yes
Starry Dong	VP Castrol Strategy	3 Oct, 2021	Yes
Rich Clark	Competitive and CI Manager, Supply Chain	4 Oct, 2021	Yes