

Module: Introduction**Page: Introduction****CC0.1****Introduction**

Please give a general description and introduction to your organization.

BARLOWORLD (BAW) is a distributor of leading international brands providing integrated rental, fleet management, product support and logistics solutions. The core divisions of the group comprise Equipment and Handling (earthmoving, power systems, materials handling and agriculture), Automotive and Logistics (car rental, motor retail, fleet services, used vehicles and disposal solutions, logistics management and supply chain optimisation). We offer flexible, value adding, integrated business solutions to our customers backed by leading global brands. The brands we represent on behalf of our principals include Caterpillar, Hyster, Avis, Audi, BMW, Ford, General Motors, Mazda, Mercedes Benz, Toyota, Volkswagen, Massey Ferguson and others.

Barloworld has a proven track record of long-term relationships with global principals and customers. We have an ability to develop and grow businesses in multiple geographies including challenging territories with high growth prospects. One of our core competencies is an ability to leverage systems and best practices across our chosen business segments. As an organisation we are committed to sustainable development and playing a leading role in empowerment and transformation. The company was founded in 1902 and as at 30 September 2013 had operations in 25 countries around the world with approximately 70% of just over 19 600 employees in South Africa.

BAW is driven by the maxim of creating long term sustainable value for all its stakeholders. BAW's commitment to creating long term value for all its stakeholders, driven by its Value Based Management approach, includes, inter alia:

- o Providing customers with integrated and environmentally sound solutions they require to meet their sustainable development objectives (including managing their impact on climate change);
- o Acting in the best interests of principals and representing them in a manner that reflects their sustainable development objectives;
- o Ensuring inspiring climate for employees to work in and within which all have equal opportunity to fulfil their aspirations and be proud ambassadors of the group;
- o Delivering sustainable returns to its shareholders that are not achieved at the expense of future generations; and
- o Being regarded as a responsible corporate citizen by all its stakeholders, including communities in which it operates.

This commitment is underscored by integrated management approach which requires accountability and responsibility for economic, social and environmental aspects of business activity. BAW has adopted a risk management approach, stakeholder engagement and strategic planning framework which allows for activities

and management focus to be structured on the group's 6 strategic focus areas: Integrated customer solutions; People; Empowerment and transformation; Sustainable development; Financial returns and Profitable growth.

The sustainable development strategic focus area positions climate change response as central to the success of BAW's long term value creation objectives. Although BAW's GHG emissions are fairly limited (267 624 tCO₂e scope 1&2 FY2013), it has placed significant focus on reducing emissions. The group has set an internal aspirational target of a 12% efficiency improvement for both its non-renewable energy consumption and GHG emissions (scopes 1 and 2) by 2014FYE off a 2009 baseline.

BAW understands that the use of its services and the products it distributes has an impact on the carbon footprint of its customers. As such, BAW strives to conduct its activities in a responsible manner and offer products and services that reduce its customers' carbon footprint and limit their exposure to climate change risks.

CC0.2

Reporting Year

Please state the start and end date of the year for which you are reporting data.

The current reporting year is the latest/most recent 12-month period for which data is reported. Enter the dates of this year first.

We request data for more than one reporting period for some emission accounting questions. Please provide data for the three years prior to the current reporting year if you have not provided this information before, or if this is the first time you have answered a CDP information request. (This does not apply if you have been offered and selected the option of answering the shorter questionnaire). If you are going to provide additional years of data, please give the dates of those reporting periods here. Work backwards from the most recent reporting year.

Please enter dates in following format: day(DD)/month(MM)/year(YYYY) (i.e. 31/01/2001).

Enter Periods that will be disclosed

Mon 01 Oct 2012 - Mon 30 Sep 2013

CC0.3

Country list configuration

Please select the countries for which you will be supplying data. This selection will be carried forward to assist you in completing your response.

Select country
Angola
Australia
Botswana
Cape Verde
China
Germany
Ghana
Hong Kong
Lesotho
Malawi
Mozambique
Namibia
Portugal
Russia
Sao Tome and Principe
South Africa
Spain
Swaziland
United Arab Emirates
United Kingdom
United States of America
Zambia
Zimbabwe
Andorra
Congo, Democratic Republic of the

CC0.4

Currency selection

Please select the currency in which you would like to submit your response. All financial information contained in the response should be in this currency.

ZAR (R)

CC0.6

Modules

As part of the request for information on behalf of investors, electric utilities, companies with electric utility activities or assets, companies in the automobile or auto component manufacture sectors, companies in the oil and gas industry, companies in the information technology and telecommunications sectors and companies in the food, beverage and tobacco sectors should complete supplementary questions in addition to the main questionnaire.

If you are in these sectors (according to the Global Industry Classification Standard (GICS)), the corresponding sector modules will not appear below but will automatically appear in the navigation bar when you save this page. If you want to query your classification, please email respond@cdp.net.

If you have not been presented with a sector module that you consider would be appropriate for your company to answer, please select the module below. If you wish to view the questions first, please see <https://www.cdp.net/en-US/Programmes/Pages/More-questionnaires.aspx>.

Further Information

Organisational boundaries for collection of data reflect those used for financial purposes to ensure alignment between financial, social and environmental management and reporting. Data from operations in Ivory Coast, Democratic Republic of Congo, Siberia and Zimbabwe is not consolidated into financial and non-financial reporting since these are not companies over which BARLOWORLD exercises control (financial). This is in line with the organisational boundary setting approach as per the GHG Protocol Reporting Standard (control vs equity).

Module: Management

Page: CC1. Governance

CC1.1

Where is the highest level of direct responsibility for climate change within your organization?

Individual/Sub-set of the Board or other committee appointed by the Board

CC1.1a

Please identify the position of the individual or name of the committee with this responsibility

The Group Risk and Sustainability Committee, which is one of seven sub-board committees

The Committee was established to assist the board in ensuring sound corporate governance, improving internal controls and monitoring company performance. The Committee assists the board in recognising all substantive sustainability, climate change, environmental and health and safety risks to which the group is exposed and in ensuring that the requisite management culture, practices, policies and systems are implemented and function effectively within the group. In giving consideration to Safety, Health and Environmental (SHE) aspects of the group, the committee receives SHE reports on a quarterly basis which includes climate change information such as emissions and energy usage as well as related efficiency improvement initiatives, and progress towards aspirational efficiency targets.

CC1.2

Do you provide incentives for the management of climate change issues, including the attainment of targets?

Yes

CC1.2a

Please provide further details on the incentives provided for the management of climate change issues

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator
Director on board	Monetary reward	Applicable to executive director. Achievement of defined group sustainability objectives, non-renewable energy efficiency and greenhouse gas emissions (scopes 1 and 2) reduction targets.
Chief Executive Officer (CEO)	Monetary reward	Achievement of group strategy which incorporates sustainable development objectives such as the group's aspirational targets to reduce non-renewable energy and greenhouse gas emissions (scope 1 and 2) intensity.
Other: Environment/sustainability managers	Monetary reward	Achievement of and reporting on defined sustainability initiatives/objectives, energy efficiency and emission reduction targets. Included in the performance indicators are the group's aspirational targets for improvements in non-renewable energy efficiency and reduction in greenhouse gas emissions (scope 1 and 2) intensity.
All employees	Recognition	Employees are responsible for the sustainability of the organisation through the fulfilment of their respective

Who is entitled to benefit from these incentives?	The type of incentives	Incentivized performance indicator
	(non-monetary)	roles in the context of the group's commitment to responsible custodianship of the environment.
Other: Divisional CEO's	Monetary reward	Achievement of divisional strategy which incorporates sustainable development targets.

Further Information

Page: **CC2. Strategy**

CC2.1

Please select the option that best describes your risk management procedures with regard to climate change risks and opportunities

Integrated into multi-disciplinary company wide risk management processes

CC2.1a

Please provide further details on your risk management procedures with regard to climate change risks and opportunities

Frequency of monitoring	To whom are results reported	Geographical areas considered	How far into the future are risks considered?	Comment
Six-monthly or more frequently	Individual/Sub-set of the Board or committee appointed by the Board	All countries and geographical regions in which the group operates are considered in the risk assessment process both at divisional and group levels.	> 6 years	

CC2.1b

Please describe how your risk and opportunity identification processes are applied at both company and asset level

Climate change risks and opportunities are identified through detailed, robust systematic strategic planning, risk and opportunity assessment procedures. These procedures engage all levels of the organisation and involve continual review and reporting at management, executive and board levels. Identification and assessment of the risks and opportunities begins with divisional management at asset level. Divisional management is responsible for ongoing monitoring and management of their operating companies' risks and opportunities. These risks and opportunities are reported to the group Risk and Sustainability Committee (RSC) who is responsible for consolidating the risks and opportunities on a company level. The RSC assists the board in recognising material risks and in ensuring that the requisite risk management culture, practices, policies and systems are implemented and functioning effectively. The RSC also ensures that opportunities are considered and prioritised and that feasible opportunities are pursued. Through this robust process, initiatives are identified to address the material risks and act on feasible opportunities.

CC2.1c

How do you prioritize the risks and opportunities identified?

The identified risks, including those of climate change, are recorded in divisional and group risk registers, comprehensively assessed and given residual risk scores. This process results in a prioritisation of risks to allow for the allocation of resources required to address the risks and to monitor performance in terms of risk management. Risks are then responded to through acceptance, transfer, avoidance or reduction strategies, taking risk appetites and tolerance levels into consideration. The same process is followed for opportunities. Opportunities are identified, assessed and ranked through a process of assessing the potential value of the opportunity to BAW. Resources are allocated to act on prioritised opportunities to capture value for the group. Progress in terms of realising the opportunities is monitored.

CC2.1d

Please explain why you do not have a process in place for assessing and managing risks and opportunities from climate change, and whether you plan to introduce such a process in future

Main reason for not having a process	Do you plan to introduce a process?	Comment
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CC2.2

Is climate change integrated into your business strategy?

Yes

CC2.2a

Please describe the process of how climate change is integrated into your business strategy and any outcomes of this process

i. Impact on the strategy: BAW's strategic framework includes 6 focus areas to which executive teams give priority to ensure sustainable value creation for all stakeholders. Sustainable development, encompassing climate change, is one of the 6 strategic areas. Stakeholder engagement and consultation informs and guides group activities. This approach is institutionalised through structured strategic planning and risk management initiatives. The integration of strategy and sustainability is evident in group roles and responsibilities with both aspects covered in the portfolio of a group executive with responsibility for strategy and sustainability, ensuring an integrated approach to stakeholder value creation. BAW's strategic planning framework is cascaded throughout the organisation and appropriately adapted for each operation. BAW's strategic focus areas are supported by critical success factors, appropriate action plans and measurable performance indicators. The strategic intent of sustainable development is:

- o Achieve profitable growth by offering products and services which capitalise on emerging business opportunities, including climate change
- o Realise cost savings through energy efficiencies and other sustainable business practices
- o Enhance BAW's reputation by taking a leading role in these
- o Engage stakeholders to guide appropriately BAW's value propositions
- o Approach management and reporting in an integrated manner that entrenches accountability for economic, environmental and social activities
- o Aspirational 12% improvement in non-renewable energy and GHG emissions (scope 1 and 2) efficiencies by 2014FYE off a 2009 baseline year
- o MARSO (Measure, Avoid, Reduce, Switch, Offset) to minimise carbon and wider environmental footprints
- o Provide solutions that create value for BAW's customers by assisting them to achieve their own sustainable development objectives, which include addressing climate change.

ii. Climate change influence on business strategy: BAW's strategy has been influenced by the following major aspects of climate change:

- Reputation and responsibility: BAW is committed to conducting its activities in an environmentally responsible manner and being a responsible corporate citizen. Integration of climate change into the business strategy comes from the need to act responsibly and to conduct business in a transparent and ethical manner. BAW strives to manage the impacts (mitigate risks and maximize opportunities) to ensure that the group's reputation as a responsible corporate citizen remains untarnished.
- Increased operational costs: The proposed introduction of a carbon tax coupled with the increase in electricity and fuel prices has driven the need to improve energy efficiency, resulting in reduced GHG emissions against a business as usual scenario. In an effort to reduce the impact of a carbon tax, BAW has set an aspirational target to drive emission reductions.
- Changes in customer expectations: The group's customers may require environmentally sound products that assist them in achieving their emission reduction targets. This has driven BAW and its leading international principals to develop new technologies, adapt existing technologies and offer new products and services that meet customer demands.
- Opportunities: Climate change presents a number of opportunities, also influencing BAW's strategy. These include the development of new products and opportunities to differentiate the group's offering in light of the need to reduce emissions.

iii. Impact on short term strategy (3-5 yrs): Climate change has influenced short term strategy through the introduction of an aspirational emissions efficiency target which aims to improve emissions intensity by 12% by 2014FYE off a 2009 baseline. BAW's focus in the short term has been on the implementation of emissions reduction activities in pursuit of this aspirational target. Also, the group has adopted a MARSO approach to manage emissions. Initiatives in this regard include enhanced climate change data collection, reporting and communication processes and systems. Also important are internal environmental awareness and communication initiatives, the implementation of energy efficiency initiatives which positively impact the group's emissions, new buildings incorporating environmentally beneficial aspects, recycling (including rebuild and remanufacture activities), waste disposal, and an enhanced employee value proposition incorporating environmental stewardship and responsible corporate citizenship.

iv. Impact on long term strategy (> 5 yrs): BAW has placed long term strategic focus on offering products and solutions that assist customers in achieving their environmental objectives and in reducing their GHG emissions. These products will also assist customers in terms of operational resilience and long term sustainability. Climate change has influenced BAW's long term strategy by increasing focus on development of more environmentally friendly products and service offerings and internal environmental stewardship initiatives. BAW is focused on product development to retain existing markets and to enter new markets. Embedded in the existing, short term and long term strategy is continued association with leading international brands and principals and diversification in terms of geographies and products. These aspects of BAW's strategy allow the group to mitigate many of the risks associated with climate change.

v. Strategic advantage over competitors: BAW has reduced its operational costs through implementation of emissions efficiency improvement projects in pursuit of its aspirational target. Not only have the implemented projects improved emissions efficiency, but they have also positively impacted on electricity and fuel consumption and related operational costs, and have improved organisational resilience. BAW has rebuild and remanufacture facilities which extends the lifespan of machines and equipment. Less energy is used to remanufacture than to produce a completely new product. Integrating climate change into the strategy has provided BAW with a competitive advantage in terms of product offering. BAW engages with world-class principals that are managing the risks and opportunities presented by climate change on a continual basis.

vi. Substantial business decisions: Investment (> R5m) was made in emission efficiency improvement projects within the group. BAW has invested in making new dealerships and buildings 'green' and energy efficient. BAW invested R250m and USD11m to date in rebuild and remanufacture facilities in South Africa and Russia, respectively. This investment was driven by the need to extend the life of equipment and reduce the number of components and machinery disposed of on an annual basis. This has a positive impact on emissions in the supply chain and less energy is used in the remanufacture process than in the production of a new machine or component.

CC2.2b

Please explain why climate change is not integrated into your business strategy

CC2.3

Do you engage in activities that could either directly or indirectly influence public policy on climate change through any of the following? (tick all that apply)

Direct engagement with policy makers
Trade associations

CC2.3a

On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate Position	Details of engagement	Proposed legislative solution
Energy efficiency	Support	<p>How BAW is engaging: BAW is concerned about climate change and appreciates the causal link between greenhouse gas emissions and global warming. BAW believes that improving energy efficiency, particularly non-renewable fossil fuels, benefits climate change and related policies. Accordingly, BAW was an early signatory to South Africa's Energy Efficiency Accord (EEA) with the South African Department of Minerals and Energy, and subsequently a signatory of the South African National Business Initiative's (NBI) Energy Efficiency Leadership Network's (EELN) Energy Efficiency Pledge. Other pledge signatories include BUSA and the Department of Energy. The company is a member of the EELN and has representation on the NBI's EELN Advisory Committee. Name of Legislation: various energy efficiency related initiatives and legislation. Geographies applicable: Predominately South Africa, but also in other geographies where BAW operates.</p>	<p>Through signing the EELN Pledge, BAW commits to: - Developing a Road map/ plan for improving energy efficiency in its operations, supported by the implementation of an appropriate energy management system. - Developing internal energy efficiency targets that are appropriate to its operations and activities and which respond proactively to, and are aligned with appropriate Government policies and strategies. - Reporting appropriately on efforts to promote energy efficiency and progress made towards set energy improvement targets in its operations within the parameters of national legislation. - Working with stakeholders on energy efficiency related issues to build capacity and develop the required skills to implement energy efficiency programmes and drive the required behavioural changes. The NBI consists of companies that provide leadership and peer support in achieving energy efficiencies and reducing emissions. The association also provides a platform for shared learning and best practice.</p>
Carbon tax	Support with minor exceptions	<p>How BAW is engaging: BAW understands that South Africa is planning the implementation of a carbon tax in 2016. BAW is supportive of the drive to reduce emissions. However, BAW is equally mindful of the risk to growth and jobs posed by the introduction of a carbon price and BAW seeks to engage constructively with government on this issue through the Business Unity South Africa (BUSA) Carbon Tax Task Team. BAW contributes to this task team that presents the consolidated views of business to government. Name of Legislation: Carbon tax Geographies applicable: South Africa</p>	<p>The introduction of a carbon tax in South Africa has been delayed by one year (from 2015 to 2016) in order to allow for National Treasury to consider the response from business. As mentioned, BAW is supportive of the need to drive emission reductions in South Africa, but believes that the design of the carbon tax needs to be carefully considered to avoid adverse impacts on growth and jobs.</p>

CC2.3b

Are you on the Board of any trade associations or provide funding beyond membership?

Yes

CC2.3c

Please enter the details of those trade associations that are likely to take a position on climate change legislation

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Business Leadership South Africa	Consistent	Business Leadership South Africa (BLSA) is an independent association whose members represent South African big business leadership and major multinational investors. BLSA is mindful of the need to reduce emissions and use energy efficiently. However, they are equally mindful of the risk to growth and jobs posed by increasing electricity prices and the introduction of carbon taxes. BLSA seeks to engage constructively with government on these issues.	During the 2013 financial year, BAW's Chief Executive was on the board of BLSA and engaged at such level. BAW is supportive of BLSA's position on climate change. When policy documents and/or regulations are released, BAW contributes by providing comments on the documentation to form part of the information informing BLSA's position.
The Road Freight Association (Board member)	Consistent	The Road Freight Association (RFA) is a facilitating body which influences the state of the industry, rates, upkeep of the road infrastructure, road safety, freight security, driver interests, cross-border transport, development funding for emerging operators, education, health, the fuel price, law enforcement, labour relations and many other issues related to road freight transport. One of the core values is sustainability and sustainable transport practices of which climate change forms a component thereof. The RFA acknowledges the need to reduce emissions and curb climate change, However, it is also mindful of the fact that the transportation industry in South Africa would be negatively impacted by the introduction of a carbon tax and cannot afford any additional taxes.	BAW is represented on the board as well as in the carbon tax committee of this association. BAW's engagement at these levels includes input on sustainable transport and carbon reduction initiatives for the industry to consider. BAW is supportive of the position adopted by the RFA and contributes by engaging in discussions, commentary and debates on carbon reduction initiatives and sustainable transport.

Trade association	Is your position on climate change consistent with theirs?	Please explain the trade association's position	How have you, or are you attempting to, influence the position?
Southern African Vehicle Rental and Leasing Association	Consistent	Southern African Vehicle Rental and Leasing Association (SAVRALA) is the representative voice of Southern Africa's vehicle rental, leasing and fleet management industries. SAVRALA has a combined membership base of over 38 of South Africa's top rental and leasing companies. Sustainability is a strategic imperative for the industry but it relies on its members, many of whom are already part of major corporate organisations, to manage their carbon reduction programs and meet any legislative requirements. SAVRALA facilitates the development of appropriate solutions, including giving guidance on climate change policy development.	BAW is represented on the board of SAVRALA through Avis Rent a Car. Avis Rent a Car is a long standing member of SAVRALA and provides input on all key issues facing the industry, including giving guidance on policy development. An Avis Rent a Car Executive currently holds the position of SAVRALA President.
Tourism Business Council South Africa (TBCSA)	Consistent	The TBCSA represents South African tourism business interests and seeks to ensure that the country offers both its domestic and international visitors a world class experience. Sustainable tourism is a key strategic focus area.	BAW is represented on the board of TBCSA through Avis Rent a Car. Avis Rent a Car is a member of the TBCSA Board which provides input on all key issues facing the tourism industry, including giving guidance on policy development, which would cover sustainable tourism.

CC2.3d

Do you publically disclose a list of all the research organizations that you fund?

CC2.3e

Do you fund any research organizations to produce or disseminate public work on climate change?

CC2.3f

Please describe the work and how it aligns with your own strategy on climate change

CC2.3g

Please provide details of the other engagement activities that you undertake

CC2.3h

What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

BAW ensures that all engagements are consistent with its overall climate change strategy through ensuring that all relevant employees within the group understand and are aligned with BAW's position on climate change. BAW representatives on the various committees are appropriately mandated prior to engagement to ensure consistency. Internal meetings with these representatives are held on a regular basis (including individual discussions, monthly sustainability champion meetings, executive and management meetings). These meetings provide an opportunity for the representatives to provide feedback and to be informed on any changes to the group's position (if new regulation is released etc.). In this way, the representatives participate in structured feedback processes, are kept informed of the group's approach, and are able to communicate the group's position and strategy on climate change. Also, the Barloworld Climate Change Policy has been widely distributed across the group and is publicly available.

CC2.3i

Please explain why you do not engage with policy makers

Further Information

Page: CC3. Targets and Initiatives

CC3.1

Did you have an emissions reduction target that was active (ongoing or reached completion) in the reporting year?

Intensity target

CC3.1a

Please provide details of your absolute target

ID	Scope	% of emissions in scope	% reduction from base year	Base year	Base year emissions (metric tonnes CO2e)	Target year	Comment
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CC3.1b

Please provide details of your intensity target

ID	Scope	% of emissions in scope	% reduction from base year	Metric	Base year	Normalized base year emissions	Target year	Comment
Int1	Scope 1+2	100%	12%	metric tonnes CO2e per unit revenue	2009	4.4	2014	It is an aspirational target set for the end of the 2014 financial year and based on a "business as usual" scenario which tracks turnover as a proxy for business activity. It is not anticipated that progress towards the target will be in a linear manner on an annual basis. The intention is to focus attention and drive commitment to improving energy and emission efficiency with concomitant benefits of positively contributing to climate change & realising cost savings.

CC3.1c

Please also indicate what change in absolute emissions this intensity target reflects

ID	Direction of change anticipated in absolute Scope 1+2 emissions at target completion?	% change anticipated in absolute Scope 1+2 emissions	Direction of change anticipated in absolute Scope 3 emissions at target completion?	% change anticipated in absolute Scope 3 emissions	Comment
Int1	Increase	25.98			BAW anticipates that absolute emissions will increase by 25.98% at the end of the target period 2014 over the baseline 2009 but at a substantially lesser rate than a 'business as usual' scenario due in part to BAW's aspirational efficiency targets. Scope 3 emissions will increase with increased business activity. Emissions relating to business travel will continue to receive focus and should also increase at a lesser rate than 'business as usual.'

CC3.1d

For all of your targets, please provide details on the progress made in the reporting year

ID	% complete (time)	% complete (emissions)	Comment
Int1	80%	58%	Our operations generally continue to make good progress towards our aspirational efficiency improvement targets through implementation of efficiency initiatives. The increased fuel consumption of our expanding South African Logistics' road transport operations increased the emission intensity level in this business, while our other businesses continue to improve against their respective 2009 baselines. At a consolidated group level, Logistics' consumption and intensity levels impact the group patterns resulting in higher outcomes. It is expected that this trend will continue as the transport aspects of our logistics business continues to expand which may negatively affect progress against our aspirational targets set for the end of our 2014 financial year.

CC3.1e

Please explain (i) why you do not have a target; and (ii) forecast how your emissions will change over the next five years

CC3.2

Does the use of your goods and/or services directly enable GHG emissions to be avoided by a third party?

Yes

CC3.2a

Please provide details of how the use of your goods and/or services directly enable GHG emissions to be avoided by a third party

- i. BAW acquired a 25% shareholding in re- which is a waste management company. re- focuses on reducing, reusing and recycling waste with the objective of reducing GHG emissions associated with waste disposal. By offering the services of re- to its customers, BAW is assisting customers reduce their GHG emissions.
- ii. re- provides customers with an estimate of emissions avoided through the use of their services. Generally, recycling of 1 kg of cardboard results in the avoidance of 0.38 tCO₂e. Similarly, recycling plastic bags results in a reduction of 2.2 tCO₂e per kg.
- iii. The emission reductions are quantified by calculating the emissions avoided as a result of reuse or recycling of waste.
- iv. The purchase of a shareholding in re- allows BAW and its customers to reduce emissions associated with waste disposal. This reduction could potentially be monetized into CERs. However, given the current carbon market price, the cost to monetize the emission reductions is higher than the benefit from the sale of the CERs.
- i. BAW Equipment distributes Caterpillar earthmoving equipment. Caterpillar Inc. has developed a number of energy efficient and low emitting technologies, for example, the Cat 988H Performance Plus Wheel Loader update, the new Positive Flow Control hydraulics and new Performance Series Bucket enables increased productivity and additional fuel savings to be realised. ii. The Cat 988H Performance Plus Wheel Loader update increases productivity by 10% for the same energy consumption. The new Positive Flow Control hydraulics has demonstrated fuel savings of up to 5%.
- iii. The saving is based on a reduction in fuel consumption multiplied by the emission factor for the fuel. The actual emissions saving is dependent on the customer's use of the Caterpillar vehicles.
- iv. The equipment is used by BAW's customers. The energy efficient nature of the equipment enables the users to access CERs or ERUs. However, given the current carbon market price, the cost to monetize the emission reductions is higher than the benefit from the sale of the CERs.
- i. BAW Handling's principal NMHG generally offers the most energy efficient equipment (energy use per load moved) of any manufacturer. Electric trucks incorporate systems that recapture energy when braking and lowering loads. Improved product design results in less weight and improved efficiency. Hyster is investigating advanced, more efficient battery chemistries and technologies to reduce energy consumption and carbon emissions.
- ii. The Hyster Reachstackers / Big Trucks saves up to 15% in fuel (with related emissions reductions) against competitor trucks, similarly the new Fortens range LPG forklifts save up to 15% in fuel.
- iii. The saving is based on a reduction in fuel consumption multiplied by the emission factor for the fuel. The actual emission saving is dependent on the customer's

use of the Hyster vehicles.

iv. Use of such equipment enables customers to reduce their carbon footprints and provides the potential to access CERs or ERUs by engaging in the carbon market and monetizing their emission reductions. However, given the current carbon market price, the cost to monetize the emission reductions is higher than the benefit from the sale of the CERs.

i. In BAW Automotive division, motor retail operations represent leading global vehicle manufacturers which continue to develop and introduce energy efficient and low emitting hybrid and electric vehicles. Avis' fleet consisted on average 78 of hybrid vehicles per month for the financial period. All fleets include latest vehicle models and technology, which results in general improvement in energy efficiency and emission reductions.

ii. 33gCO₂/km avoided.

iii. The avoided emissions are determined by the difference between the emissions from a hybrid vehicle (Honda Jazz) and the emissions from a similar make and model 'non-hybrid' vehicle. Emission standards were sourced from the Honda website.

iv. Use of such equipment enables customers to reduce their carbon footprints and provides the potential to access CERs or ERUs by engaging in the carbon market and monetizing their emission reductions. However, given the current carbon market price, the cost to monetize the emission reductions is higher than the benefit from the sale of the CERs.

CC3.3

Did you have emissions reduction initiatives that were active within the reporting year (this can include those in the planning and implementation phases)

Yes

CC3.3a

Please identify the total number of projects at each stage of development, and for those in the implementation stages, the estimated CO₂e savings

Stage of development	Number of projects	Total estimated annual CO ₂ e savings in metric tonnes CO ₂ e (only for rows marked *)
Under investigation	3	
To be implemented*	1	25.92
Implementation commenced*	2	42.68
Implemented*	63	2306.23
Not to be implemented	0	

CC3.3b

For those initiatives implemented in the reporting year, please provide details in the table below

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
Energy efficiency: Building services	Nature of activity: Occupancy sensors fitted in Boksburg Power. This technology will automatically switch off lights when offices / facilities are unoccupied. Scope: 2 Voluntary implementation	41	49631	21649	<1 year	The life expectancy of the motion sensors are conservatively estimated between 5 - 10 years.	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh. There are approximately 35 additional similar projects planned to be implemented across the group. Such additional projects are not included in the 'To be implemented' in our response to CC3.3a above.
Energy efficiency: Processes	Nature of activity: Replacement of compressors at Barloworld Equipment's Isando operations with more efficient appropriately sized equipment. The new compressors offer variable speed and capacity technology that optimally matches output to requirements, thus reducing waste. Scope: 2 Voluntary implementation	279	323311	439015	1-3 years	The expected lifetime of the compressors are expected to range between 15 - 20 years.	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
Energy efficiency: Processes	Nature of activity: Replacement of compressors at Barloworld Equipment's Boksburg operations with more efficient appropriately sized equipment. The new compressors offer variable speed and capacity technology that optimally matches output to requirements, thus reducing waste. Scope: 2 Voluntary implementation	423	489702	130000	<1 year	The expected lifetime of the compressors are expected to range between 15 - 20 years.	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building services	Nature of activity: Occupancy sensors fitted in within the Barloworld Logistics Offices at Barlow park in Sandton. This technology will automatically switch off lights and HVAC when offices / facilities are unoccupied. Scope: 2 Voluntary implementation	63	73400	195360	1-3 years	The life expectancy of the motion sensors are conservatively estimated between 5 - 10 years.	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh. There are approximately 35 additional similar projects planned to be implemented across the group. Such additional projects are not included in the 'To be implemented' in our response to CC3.3a above.
Transportation: fleet	Nature of activity: Car rental fleets generally include vehicles under 12 months old fitted with the latest technology, resulting in overall energy and emissions efficiency. Avis' rental fleet consisted on average 78 of hybrid vehicles per	53.64	0	6177600		The rental fleet is adjusted on a regular basis but generally include vehicles up to a maximum of 12 months.	These costs represent an investment in the rental fleet. Therefore the payback period does not factor any monetary savings from energy efficiency. The investment costs are calculated on the difference

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
	month for the financial period. Scope: 3 Voluntary implementation						between the cost price of a hybrid vehicle versus a standard (non-hybrid) similar make and model vehicle. The annual CO2e savings is calculated by multiplying the emissions savings (hybrid vehicle versus a standard similar model) by the number of kilometers travelled by all hybrid vehicles on the Avis Rent a Car fleet over the 2013 financial year.
Energy efficiency: Building fabric	Nature of activity: Logistics new cold storage warehouse in Dubai incorporates skylights that maximise natural light without affecting temperature and induction lighting which consumes 20% less electricity than traditional lighting at night. In addition, the warehouse forklifts operate on bio-diesel and utilise chargers that use 22% less electricity than regular models. Scope: 2 Voluntary implementation						
Transportation: fleet	Nature of activity: Logistics' collaboration with the Council for Scientific and Industrial Research (CSIR) in South Africa and others in designing a more energy efficient and ergonomic vehicle	13.77					

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
	<p>that can carry a higher payload and be streamlined enough in its design to reduce fuel consumption and ultimately emissions. The rig travelled 100 000km in the six-month test period, and saved on average between 7% -10% in fuel compared to the rest of the fleet travelling the same route, with the same weather conditions and same payload. The total wind-drag reduction from the Green Trailer conversion also exceeded expectations, at up to 43%. The other major benefit from the significant reduction in fuel use is lower carbon emissions. The fuel saving amounted to a reduction of a maximum of 13.77 tCO2e emissions during the test period. Four similar aerodynamic trailers have been included in the logistics' fleet. The efficiency data for these trailers are not available to date but expectation is that these will produce similar savings than those of the 'green trailers'. Scope: 1 or 3 depending on nature of the contract Voluntary implementation</p>						
Energy efficiency:	Nature of activity: A number of BAW's operations installed energy	1040	1204092	1355436	1-3 years	The life expectancy of the	Estimated tCO2e savings based on Barloworld's South African

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
Building services	efficient lighting and motion sensors on lighting and HVAC in the reporting period Scope: 2 Voluntary implementation					motion sensors are conservatively estimated between 5 - 10 years.	GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building services	Nature of activity: A number of BAW operations installed inverter units on HVAC system Scope type: 2 Voluntary implementation	22.58	26138	341261	11-15 years	The life expectancy of the inverter units are conservatively estimated between 5 - 10 years.	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building services	Nature of activity: A number of BAW operations installed solar water heaters and heat pumps Scope: 2 Voluntary implementation	52.89	61228	228468	4-10 years	The life expectancy of the inverter units are conservatively estimated between 5 - 10 years.	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building services	Nature of activity: Toyota Stellenbosch installed power factor correction Scope: 2 Voluntary implementation	136.64	158171	50000	<1 year	In excess of 3 years	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building fabric	Nature of activity: Toyota Stellenbosch installed light-coloured roof sheeting for thermal reflection, roof insulation for thermal insulation and translucent sheeting on washbay area for natural light. Overhangs and sun	38.84	44955	1022036	21-25 years	In excess of 25 years	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
	control was also used where possible and all external walls were painted with light colours to allow for thermal reflection. Scope: 2 Voluntary implementation						
Energy efficiency: Building fabric	Nature of activity: Toyota Stellenbosch Automark installed light-coloured roof sheeting for thermal reflection and roof insulation for thermal insulation. All external walls were painted light colours to allow for thermal reflection. Scope: 2 Voluntary implementation	2.98	3446	206000	>25 years	In excess of 25 years	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building services	Nature of activity: BMW Fountains installed variable speed drives on ventilation fans. Scope: 2 Voluntary implementation	6.14	20116	226000	11-15 years	In excess of 10 years	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building fabric	Nature of activity: BMW Fountains installed sunscreens used to limit the impact on the HVAC. Scope: 2 Voluntary implementation	11.22	12991	442750	>25 years	In excess of 25 years	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building fabric	Nature of activity: BMW Fountains replaced clear glazing in showrooms with Sunergy. Scope: 2 Voluntary implementation	11.23	13000	165000	11-15 years	In excess of 25 years	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency:	Nature of activity: BMW Fountains installed timers on ventilation fans	61.68	71400	9800	<1 year	In excess of 3 years	Estimated tCO2e savings based on Barloworld's South African

Activity type	Description of activity	Estimated annual CO2e savings (metric tonnes CO2e)	Annual monetary savings (unit currency - as specified in CC0.4)	Investment required (unit currency - as specified in CC0.4)	Payback period	Estimated lifetime of the initiative, years	Comment
Building services	Scope: 2 Voluntary implementation						GHG conversion factor for electricity. Estimated monetary savings is based on R1.20KWh.
Energy efficiency: Building services	Nature of activity: Blackheath Training Centre installed a Bell Push System Scope: 2 Voluntary implementation	10.44	12084	2200	<1 year		Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building services	Nature of activity: Automotive Head Office installed a timer on kitchen boiler Scope: 2 Voluntary implementation			5098			Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.
Energy efficiency: Building services	Nature of activity: Audi Pietermaritzburg installed energy efficient air conditioning (VRV system with heat recovery) Scope: 2 Voluntary implementation	38.18	44200	326656	4-10 years	In excess of 10 years	Estimated tCO2e savings based on Barloworld's South African GHG conversion factor for electricity. Estimated monetary savings is based on R1.20kWh.

CC3.3c

What methods do you use to drive investment in emissions reduction activities?

Method	Comment
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Method	Comment
Compliance with regulatory requirements/standards	Compliance drives investment in emission reduction activities. BAW ensures full compliance with regulatory requirements/standards and has established targets in support of these. Carbon pricing schemes (both introduced and planned) have driven investment in emission reduction projects. BAW has introduced an aspirational target to improve emissions efficiency and is actively implementing emission reduction projects to reduce the impact of a carbon price (current and in the future). BAW was an early signatory to South Africa's Energy Efficiency Accord (EEA) with the South African Department of Minerals and Energy, and subsequently a signatory of the South African National Business Initiative's (NBI) Energy Efficiency Leadership Network's (EELN) Energy Efficiency Pledge. The company also participates in Business Unity South Africa (BUSA)'s Climate Change committee, BUSA's Carbon Tax Task Team and has representation on the NBI's EELN Advisory Committee both of which assist to keep the company informed of leading practice, policies and regulatory changes.
Dedicated budget for energy efficiency	Costs of energy efficiency initiatives are not at this stage generally ring-fenced but incorporated into standard budgets and on-going cost base of BAW divisions. However, BAW has implemented and is considering implementing a number of energy efficiency projects. In FY2013, BAW spent over R5m on energy efficiency projects.
Dedicated budget for low carbon product R&D	BAW's divisions and principals are engaged in the development of new products and offerings that reduce emissions. For example, in Russia, AGCO have new models available with AdBlue engine specifications which are anticipated to save between 3% – 6% fuel saving for customers. Hyster is investigating advanced, more efficient battery chemistries and technologies to reduce energy consumption and carbon emissions. Logistics' collaboration with the Council for Scientific and Industrial Research (CSIR) in South Africa and others in designing a more energy efficient and ergonomic vehicle that can carry a higher payload and be streamlined enough in its design to reduce fuel consumption and ultimately emissions.
Dedicated budget for other emissions reduction activities	Costs of emission reduction activities are not at this stage generally ring-fenced but incorporated into standard budgets and on-going cost base of BAW divisions. Currently BAW uses the MARSO approach: Measure, Avoid, Reduce, Switch and, finally, Offset. Dedicated budgets for offsetting, if and when appropriate, are likely to be a consideration. Most divisions are within the MAR processes and are investigating the Switch and Offset options. BAW has implemented a number of emission reduction projects during FY2013. These projects have cost over R5m.
Employee engagement	Internal and external communication strategies have been developed. Employee engagement is used as a means to drive behaviour change that will result in greater awareness and energy savings. Specific employees are appointed as sustainability champions in order to communicate and liaise at division level, monitor, measure and report usage/emissions. Communication on initiatives and progress, as well as pertinent relevant information is through management meetings, performance ownership meetings, 'green' community of practice meetings, publications, intranet sites, screen savers, posters, exhibitions and newsletters. Communications initiatives share information on energy consumption/ emissions/ costs by branch or division and disseminate information on best practice. A key aspect of BAW's employee value proposition is environmental stewardship. BAW is committed to training and upskilling. BAW has a human resources practice which is constantly engaged in ensuring that it manages, retains and recruits the required skills and key talent. Sustainability is a module on the BAW Leadership Development Programme (LDP) and the BAW Executive Development Programme (EDP), both of which are attended by prospective leaders of the organisation.
Financial optimization calculations	Incorporated into feasibility studies and capital vote applications. Financial optimization drives investment in emission reduction projects as it considers the capital cost of projects against the energy cost savings achieved over the project life. All new property developments incorporate sustainable "green building" principles which are based on optimal financial

Method	Comment
	calculations. Operations have switched to more environmentally friendly methods with improved financial returns such as retrofitted lighting. As a Logistics division business offering, operational efficiency is linked to network optimisation which in turn results in increased revenue.
Internal price of carbon	The cost of carbon is used in the decision-making process for emission reduction activities. The proposed carbon tax in South Africa and the existing carbon tax in Australia are considered when evaluating the feasibility of various emission reduction projects. The basic drivers to reduce energy consumption and carbon emissions include increasing energy costs and the introduction of carbon taxes.
Internal incentives/recognition programs	Group, division, team and individual aligned key performance indicators, scorecards and awards are used to drive investment in improved energy efficiency and greenhouse gas emission reduction activities.
Other	BAW has set an aspirational target of 12% efficiency improvement in non-renewable energy and greenhouse gas emissions (scope 1 and 2) by 2014 off a 2009 baseline year. This target drives investment in energy efficiency and emission reduction projects. Functional responsibilities are managed through a group-wide, integrated performance scorecard system which includes defined climate change related objectives.
Partnering with governments on technology development	SA government is involved in the bringing about the 'green economy.' BAW partners with government where possible to assist with the development of new technologies. For example, Logistics operations initiated a project where they collaborated with the CSIR and other partners in designing a more energy efficient and ergonomic vehicle which can carry a higher payload and be streamlined enough in its design to reduce the fuel consumption and ultimately the emissions. Approximate reduction in fuel consumption is between 7%-10% per trip, Johannesburg to Durban.
Marginal abatement cost curve	BAW does consider the least cost option in terms of reducing emissions. However, it is not only about least cost, but also about operational requirements. Other factors, apart from cost, are considered in the business case when considering investment in emission reduction projects. Whilst not being pursued or implemented yet, emissions trading could reduce the group's or group companies' overall cost of compliance with emission constraints by taking advantage of differences in marginal abatement costs across different emission sources. It could drive investment in emission reduction projects. This is dependent on the recovery of the carbon market and the success of new market mechanisms created.

CC3.3d

If you do not have any emissions reduction initiatives, please explain why not

Further Information

Page: CC4. Communication

CC4.1

Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s)

Publication	Page/Section reference	Attach the document
In mainstream financial reports (complete)	Barloworld Integrated Report 2013: Pages 5, 13, 18, 24, 29, 36, 52, 63, 64, 70, 72, 76, 78, 80, 83, 84, 86, 109	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/barloworld-ir-2013.pdf
In voluntary communications (complete)	Not in public domain: JSE profile	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/http___www.jse.co.pdf
In voluntary communications (complete)	GRI Environmental section (EN1-30) pages 1 - 20	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/Environmental (EN1 - EN30).pdf
In voluntary communications (complete)	GRI Strategy and Analysis section (1.1-1.2) pages 1, 2, 4, 7, 8-9	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/Strategy and analysis (1.1-1.2).pdf
In voluntary communications (complete)	GRI Governance section (4.1-4.17) page 5	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/Governance (4.1 - 4.17).pdf
In voluntary communications (complete)	GRI Society section (SO1-10) page 4	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/Society (SO1-SO10).pdf
In voluntary communications (complete)	Barloworld UNGC COP 2013, Pages 9-13	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/barloworld-ungc-cop-gri-aligned-december-2013.pdf
In voluntary communications (complete)	BDFM publication: Pages 8, 12 - 13 , 18	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/BDFM - FINAL Combined.pdf

Publication	Page/Section reference	Attach the document
In voluntary communications (complete)	Not in public domain: Briefing Barloworld issue 17, Page 4	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/Briefing Barloworld Issue 17.pdf
In voluntary communications (complete)	Not in public domain: Briefing Barloworld issue 18, Page 2	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/Briefing Barloworld Issue 18.pdf
In voluntary communications (complete)	Financial Mail, Green Report 2013: Inside back cover	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/Financial Mail Green Report 2013.pdf
In voluntary communications (complete)	Business Day Earth 2013, Page 11	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC4.1/Business Day Earth 2013.pdf

Further Information

Module: Risks and Opportunities

Page: CC5. Climate Change Risks

CC5.1

Have you identified any climate change risks that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Risks driven by changes in regulation
- Risks driven by changes in physical climate parameters
- Risks driven by changes in other climate-related developments

CC5.1a

Please describe your risks driven by changes in regulation

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Product labeling regulations and standards	Product labelling regulations and standards may be introduced by countries. If products supplied by BAW do not have the required labelling then it may give rise to litigation, damaged reputation or monetary or non-monetary sanctions. If BAW is unable to supply products with the required labelling then this could result in reduced demand for goods and service. Three potential impacts resulting from this risk were identified: 1. Increased operational cost. 2. Reduced demand for goods/services.	Reduced demand for goods/services	Up to 1 year	Direct	Very likely	Medium-high	Inherent risk value of below R400 million and residual risk value of below R40 million.	BAW represents globally leading brands and engages with world class principals. These principals ensure that all products manufactured comply with labelling standards and regulations. BAW is committed to ensuring that all products sold have the certification, labelling, product and service information required by respective local laws. In principle, the information and labelling is the responsibility of the Original Equipment Manufacturers (OEMs). This information is conveyed to customers in handbooks, handover procedures and,	Costs associated with product labelling are not separately identifiable and are included in group's 'cost of sales' which was some R52 billion for the reporting period.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>3. Inability to do business. The most significant of these impacts was assessed as "Reduced demand for goods/services".</p>							<p>where appropriate, displayed on the vehicle, plant or equipment. The group strives to ensure that all products have information and labelling as required by the respective local authority's health and safety laws as well as those laws that pertain to safety and health in the mining sector, where applicable. Every product sold into the European Union has to be certified under Conformité Européenne (European Conformity) standards. Information also includes vehicle, plant and equipment operating and maintenance procedures and safety protocol</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Emission reporting obligations	Additional emissions reporting requirements introduced by legislation or required by customers may not be aligned with existing reporting requirements and frameworks or may exceed current disclosure. For example, the South African Department of Environmental Affairs is considering the introduction of mandatory reporting of GHG emissions for companies that emit over 100 000 tonnes of CO2e per annum. Should BAW be unable to comply with these additional reporting obligations, it	Reduced demand for goods/services	1 to 3 years	Direct	Likely	Medium-high	Inherent risk value of R325 million and residual risk value of R30 million.	The group has data collection and reporting processes in place. All reporting is aligned with best practice methodologies and frameworks including the GRI guidelines and GHG reporting protocols. Alignment with best practice methodologies and frameworks significantly reduces the risk that BAW would not be able to comply with new emissions reporting obligations. Assurance is provided by the group's external auditors around the data collection processes, methodologies and reported emissions data. Participation in business organisations also allow BAW to identify changes in reporting protocols and to respond	These costs associated with reporting, engaging with principals and customers and responding to voluntary programmes are incorporated into the ongoing operational activities and cost base of the group. One example is the cost of assurance is some R0.5m per annum.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>could result in litigation, damaged reputation or monetary or non-monetary sanctions. Failure to comply with reporting requirements may also result in reduced demand for goods and services. Three potential impacts were identified: 1. Increased operational cost. 2. Reduced demand for goods / services. 3. Inability to do business. The most significant of these impacts was assessed as "Reduced demand for goods/services".</p>							<p>appropriately. Disclosure under voluntary programmes such as the CDP's Climate Change response, assist in ensuring that the group is prepared for mandatory reporting obligations. BAW also engages with world class principals and represents leading brands. These principals ensure that all reporting obligations are complied with and that customers are satisfied with the emissions reporting on products and services. BAW actively engages with customers to ensure that reporting requirements satisfy customers' needs and that customers' expectations are met.</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental regulations, including planning	BAW identifies the predominate use of fossil- fuel based energy in its supply chain, operations products and solutions as a risk to itself and its supply chain. Essentially all BAW customer solutions are fossil fuel based, thus any change in the regulatory environment that impacts on the price, availability or levels of consumption of fossil fuels will impact pervasively on the group. Examples include the introduction of carbon pricing, caps on emissions levels or the introduction of air pollution limits. This could potentially reduce the	Reduced demand for goods/services	1 to 3 years	Direct	More likely than not	High	Inherent risk value of below R300 million with a residual risk value of below R70 million.	Minimise exposure through in-depth risk assessments and strategic responses. Ensure organisational resilience through aligned and integrated management activities and policies. These include: - Implementation of non-renewable energy and greenhouse gas (scope 1 and 2) emissions efficiency improvement targets. - Association with global leading principals and brands, provision of products and solutions with reduced environmental footprint and which assists customers achieve their sustainable development objectives. - Geographic and	In 2013, R5m spent on energy and emissions reduction, R2.5m Spent on membership fees and sponsorships including those to external environmental initiatives to public benefit, Other costs associated with managing this risk are incorporated in the operational cost base of the company and its principals. These costs are either part of the relevant product and equipment offering available from principals and therefore included in the group's 'cost of sales' which was some R52 billion.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	competitiveness of products and services and also increase the cost base. This would negatively affect BAW's competitive position and sustainable value creation potential. Two potential impacts were identified for this risk, namely: 1. Increased cost based. 2. Reduced demand for goods/services. The most significant of these impacts was assessed as "Reduced demand for goods/services".							industry diversification. BAW operates across 25 countries and has a diverse range of customer offerings across six identified strategic growth segments. - Awareness, anticipation and appropriate action through participation in and representation on corporate/business groups and organisations that provide feedback on proposed legislation.	
Air pollution limits	Customer offerings may become uncompetitive unless pollution limit specifications,	Reduced demand for goods/services	1 to 3 years	Direct	More likely than not	High	Inherent risk value of below R300 million and residual risk value of below R70	Close relationships with world class principals ensures competitive advantage and ability to provide integrated customer	BAW's globally leading principals invest in research and development to ensure product offerings

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>product efficiency regulations and standards are anticipated and met by the group's product offerings across the multiple geographies in which BAW operates. It is important for BAW and its principals to consider these standards and regulations in order to ensure that customers are supplied with equipment that is compliant. If BAW and its principals are unable to provide its customers with products that comply with standards and regulations, this could result in customers opting for competitor products, which would reduce demand for</p>						million.	<p>offerings incorporating latest technology which reduce emissions and mitigate customers' emissions-related risks. This risk is managed by the development of new technologies and services in partnership with BAW's principals that reduce customer's emissions and meet all required emission standards and regulations. for example, BAW has also invested in hybrid vehicles for the Avis rental fleet. This investment assists customers in reducing their emissions. The diverse range of product offerings, industries as well as the geographies in which BAW operates also further mitigates the impact of this risk</p>	<p>incorporate latest technologies and improved efficiencies. These costs are included in product offerings available from principals and included in the group's 'cost of sales' which was some R52 billion in the 2013FY. An example of spend on technologies which assist in reducing customer emissions is the inclusion of hybrids vehicles in the South African car rental fleet at a cost of some R27m.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	BAW's products and services. Three potential impacts were identified: 1. Increased operational cost. 2. Reduced demand for goods / services. 3. Inability to do business. The most significant of these impact was assessed as "Reduced demand for goods/services". Two risk drivers were identified: 1. Air pollution limits. 2. Product efficiency regulations and standards.							as emission regulation and implementation thereof will generally vary across sectors and regions.	
Uncertainty surrounding new regulation	Possible or impending changes to the regulatory framework creates uncertainty in the business environment. This results in a	Inability to do business	1 to 3 years	Direct	Likely	Medium-high	Inherent risk value of below R200 million and residual risk value of below R100 million. Examples include a	Uncertainty associated with new regulations may result in customer unwillingness to commit to the purchase of assets, plant and equipment. To mitigate this BAW	BAW invested R250m and USD11m to date, in rebuild and remanufacture facilities in South Africa and Russia, respectively

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>cautious approach and the inability to firmly commit to business decisions already taken or business decisions to be taken on issues such as competitive products, services and customer offerings, sectors in which to operate, business models and optimal locations. This cautious approach is adopted not only by BAW but by its principals and customers as well resulting in an inability of medium to long term decision making, eg. strategic direction, selection of product ranges, strategic</p>						<p>major customer delaying the purchase of a fleet, plant or equipment as a result of uncertainty surrounding future regulations.</p>	<p>has and is constantly innovating new product offerings that allow for flexibility eg. lease with purchase options, long-term leasing, etc. and empower customers in an uncertain environment. In addition to innovative product development that offers its customers flexibility in an uncertain environment, BAW believes that a customer's willingness to commit to a long-term partnership is also closely linked to their confidence of BAW's ability to identify and appropriately respond to any regulatory changes. Thus BAW is actively engaged in monitoring regulation, has</p>	<p>which aims to extend the lifespan of machinery and equipment, thus minimising waste. BAW acquired a 25% shareholding in re- which is a waste management company, which will, amongst other internal benefits, assist BAW in being prepared for any new waste regulations.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>partnerships, etc. Changes to regulatory frameworks impose additional administrative and cost burdens. BAW, as a diversified business, is in the unique position of having to monitor progress with regulation on climate change across a number of industries and under many jurisdictions. The diversified nature and location of BAW's operations results in increased monitoring costs and administration requirements. Three potential impacts were identified: 1. Increased operational cost. 2. Reduced</p>							<p>membership and participates in a number of corporate / business groups and organisations, which also monitor the legislative / regulatory landscape and provide feedback on proposed legislation. The globally leading principals that BAW represent also monitor the regulatory landscape to be in a position to identify and respond to any proposed changes that may impact their business environment or that of their key stakeholders. Monitoring the development of regulation enables BAW to be prepared for its implementation. An example is BAW's investment into its equipment remanufacture and</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	demand for goods / services. 3. Inability to do business. The most significant of these impact was assessed as "Inability to do business".							rebuild facilities in Russia and South Africa, addressing potential life-cycle and waste management regulations.	
Lack of regulation	The lack of regulation in certain geographies in which BAW operates may permit the purchase and use of older and cheaper technologies which produce more emissions than modern alternatives. This could result in BAW's product offerings being uncompetitively priced in these regions. Relevant countries where there is no country-wide regulation or	Reduced demand for goods/services	>6 years	Direct	Likely	Medium	Inherent risk value of below R100 million and a residual risk value of below R55 million.	BAW has a diversified range of products enabling the group to compete in markets where there is no country-wide regulation or regulation is still developing. Close relationships with world class principals ensures competitive advantage and ability to provide a wide-range of integrated customer offerings. Furthermore, many of BAW's customers are major global organisations that consider long-term sustainability in their	No additional costs associated with the mitigation of this risk. Activities such as geographic and industry diversification and engagement with world class principals are part of the group's overall risk management approach. There are also no additional costs associated with providing a wide range of products. These costs are part of the relevant

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	regulation is still developing, include: - Certain countries within Africa: BAW's operations in Africa (excluding South Africa) generate 6.2% of group emissions and 12.22% of the group revenue. - Russia, Middle East and Asia: BAW's operations in Russia, Middle East and Asia generate 2.29% and 7.93% of group revenue. Some 20% of BAW's revenue is generated from such countries indicating the potential extent of the risk.							purchasing decisions. In many instances, this results in customers selecting higher priced plant and equipment with better efficiencies. This risk is further minimised by geographical diversification across 25 countries with some 20% of group revenue generated in countries that do not yet have specific and country-wide climate change regulation.	product and equipment offering available from principals and therefore included in the group's 'cost of sales' which was some R52 billion for 2013FY.
Renewable energy regulation	Regulations could introduce specified thresholds for renewables within BAW's fuel	Increased capital cost	3 to 6 years	Direct	About as likely as not	Medium	Inherent risk value of below R70 million and residual risk value of	In 2009, the group implemented an aspirational target of a 12% efficiency improvement in non-renewable	The investment costs associated with the implementation of energy

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>mix. Most, if not all of BAW's operations, including products and facilities are fossil fuel based. The introduction of thresholds for renewables will require additional investment by BAW and its supply chain. Capital investment requirement in renewables is significant and, in many cases, more expensive than alternative sources of energy such as sourcing electricity from the grid. The installation of solar photovoltaic panels on roof space in certain operations in the group is more expensive than continuing to use electricity from</p>						below R35 million.	<p>energy by 2014 from a baseline year of 2009. The group has invested into a number of energy reduction initiatives that would reduce the impact of renewable energy regulations. BAW is actively investigating the installation of solar energy at identified facilities within the group as an alternative to electricity from the national grid. In some countries, there are incentives for renewables which could assist BAW is building the business case for the installation of renewable energy. Note that BAW has adopted a MARSO (Measure, Avoid, Reduce, Switch, Offset) approach to reducing emissions. Only once having measured, avoided and reduced</p>	<p>efficiency improvement projects exceeded R5m in 2013FY.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>the national grid. The payback periods for renewables are still long and the required capital investment could have a significant impact on BAW, its supply chain and its customers. Three potential impacts were identified: 1. Increased operational cost. 2. Increased capital cost. 3. Reduced demand for goods / services. The most significant of these impact was assessed as "Increased capital cost".</p>							emissions does BAW consider switching to alternative fuel sources.	
Carbon taxes	<p>Globally there is a trend towards implementing carbon prices. The introduction of a carbon price in the countries in</p>	Increased operational cost	Up to 1 year	Direct	Virtually certain	Low-medium	Inherent risk value of below R70 million and residual risk value of below R35	The group is focused on improving emissions efficiency against a business as usual scenario as a method of	The investment costs associated with the implementation of energy and emissions

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>which BAW operates would negatively impact on operational costs. South Africa is planning on implementing a carbon tax in January 2016. The carbon tax policy paper indicates a carbon tax on scope 1 emissions of R120 per tonne with an initial tax-free threshold of 60% and a 10% per annum increase for 5 years. This means that most companies will only pay for 40% of their emissions initially. This tax free threshold will be reduced over time. Not only will BAW be paying directly for their carbon emissions through the carbon tax, there</p>						million.	<p>minimizing the impact of a carbon tax. In 2009, the group implemented an aspirational target of a 12% efficiency improvement in non-renewable energy and GHG emissions (scope 1 and 2) by 2014 from a baseline year of 2009. The group has invested into a number of energy, and consequently emission reduction, initiatives and has embarked on carbon offset programmes. Measurement and verification is essential to understanding and managing the impact of a carbon tax. For this reason, BAW continues to have its scope 1 and 2 GHG emissions assured by their group external auditors.</p>	<p>efficiency improvement projects exceeded R5m for the reporting period. Costs relating to group's carbon offset programme were R1.85m in 2013FY. In the 2013FY, the cost incurred for assurance services for non-financial indicators (including energy and emissions) was estimated to be some R0.5m.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	will also be indirect cost implications through increased prices of electricity and fossil fuels as well as 'pass-through' costs from the supply chain. Four potential impacts were identified for this risk, namely: 1. Increased operational cost. 2. Increased capital cost. 2. Reduced demand for goods / services. 4. Inability to do business. The most significant of these impacts was assessed as "Increased operational cost".								
Voluntary agreements	Not participating in voluntary agreements could result in reputational damage and lost	Reduced demand for goods/services	Up to 1 year	Direct	Virtually certain	Low-medium	Inherent risk value of below R70 million and residual risk value of	Awareness, anticipation and appropriate action through participation in and representation on	These costs are incorporated into BAW's ongoing reporting and disclosure costs

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	opportunities for BAW.						below R10 million.	corporate/ business groups and organisations that provide feedback on voluntary agreements. Ongoing stakeholder engagement initiatives inform BAW participation and response. BAW actively engages with customers and other stakeholders to understand their expectations and requirements in terms of reporting. BAW strives to meet these expectations and report in a transparent and accurate manner. This accuracy and transparency is upheld by the process and systems that the group has in place to monitor and report on GHG emissions. BAW continues to have its scope 1 and 2	as well as its operational activities and cost base. In the 2013FY, the cost incurred for assurance services for non-financial indicators (including energy and emissions) was estimated to be in excess of R0.5m.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								GHG emissions assured by the group external auditors. BAW has signed the Energy Efficiency Leadership Network (EELN) Pledge with the Department of Energy in South Africa and also participates in CDP's Climate Change and Water disclosure projects.	
International agreements	Under the second commitment period of the Kyoto Protocol a number of countries made commitments to reduce emissions. Examples include: - South Africa's voluntary commitment to a significant emissions reduction target of 34% by 2020 and 42% by 2025, dependent	Increased operational cost	1 to 3 years	Direct	Likely	Low-medium	Inherent risk value of below R50 million and Residual risk value of below R30 million.	The group is focused on improving emissions efficiency against a business as usual scenario as a method of minimizing the impact of the carbon taxes and penalties that could arise from these global agreements. In 2009, the group implemented an aspirational target of a 12% efficiency improvement in non-renewable energy and GHG	The investment costs associated with the implementation of energy and emissions efficiency improvement projects exceeded R5m in the reporting period. Costs relating to group's carbon offset programme were R1.85m in 2013FY. In the 2013FY, the

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>on technical and financial assistance. It is believed that the greater part of responsibility for achieving this target will be passed on to the private sector. With many of its operations in SA, this target could have a significant impact on BAW. It is also possible that South Africa along with other developing countries will take on mandatory reduction targets in the new global agreement on climate change which is anticipated to come into effect in 2020 and will replace the Kyoto Protocol. These mandatory targets will affect business and could impact</p>							<p>emissions (scope 1 and 2) by 2014 from a baseline year of 2009. The group has invested into a number of energy, and consequently emission reduction, initiatives and has embarked on carbon offset programmes. Measurement and verification is essential to monitoring progress against set targets which are introduced as a result of these agreements. For this reason BAW continues to have its scope 1 and 2 GHG emissions verified by their group external auditors. Typically targets under these international agreements are country-specific and therefore geographic diversification assists in mitigating</p>	<p>cost incurred for assurance services for non-financial indicators (including energy and emissions) was estimated to be in excess of R0.5m.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>BAW's operations and cost of doing business. - The European Union has a target to reduce GHG emissions by 20% by 2020 off 1990 levels or a quantified emission limitation or reduction objective of 80%. Climate change and emission reduction legislation is already in place in a number of EU member states such as the UK. These commitments are pushed down onto businesses that operate within these respective countries. Commitments made by countries under these international</p>							the risk in this regard	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	agreements are typically pushed down onto business in the form of carbon taxes or penalties. Both of which can negatively affect the operational costs of BAW. Three potential impacts were identified: 1. Increased operational cost. 2. Reduced demand for goods and services. 3. Reduced stock price. The most significant of these impact was assessed as "Increased operational cost".								
Fuel/energy taxes and regulations	The introduction of taxes or regulations governing fuel and energy consumption, could increase the operational	Increased operational cost	1 to 3 years	Direct	Likely	Low	Inherent risk value of below R25 million and residual risk value of below R15 million.	In 2009, the group implemented an aspirational target of a 12% efficiency improvement in non-renewable energy by 2014 from a baseline	The investment costs associated with the implementation of energy efficiency improvement

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>cost base within BAW. Across the board, increases in taxes or other costs stemming from introduction of regulations will increase cost of products both up and down stream in the supply chain. This will, in turn, increase BAW's cost base and the price of products to customers which could make BAW's products uncompetitive. Two potential impacts were identified: 1. Increased operational cost. 2. Reduced demand for goods / services. The most significant of these impact was assessed as "Increased operational cost".</p>							<p>year of 2009. The group has invested into a number of energy reduction initiatives. Measurement and verification is essential to understanding and managing the impact of any fuel and energy taxes implemented. For this reason BAW continues to have its fuel and energy consumption assured by their group external auditors.</p>	<p>projects exceeded R5m in the reporting period. In the 2013FY, the cost incurred for assurance services for non-financial indicators (including energy) was estimated to be some R0.5m.</p>

CC5.1b

Please describe your risks that are driven by change in physical climate parameters

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) temperature	Changes in mean temperatures could affect working environment requiring additional expenditure on temperature control equipment, HVAC system and related energy consumption. Changes in mean temperatures could directly impact arable land patterns. This could result in reduced demand for goods and services from the agriculture sector which would impact on BAW. These changes could also lead to shifting settlement patterns as a result of farming moving outside of current production areas. The group will be negatively affected if these settlements	Reduced demand for goods/services	>6 years	Direct	Likely	Medium-high	Inherent risk value of below R200 million and a residual risk value of below R55 million.	BAW manages the risks of increased costs associated with the need for additional air-conditioning by installing and maintaining energy efficient and adequate HVAC units in its operations. Close relationships with leading world class principals and the geographical and industry diversification of the group reduces the impact of changing agricultural and settlement patterns as changes in mean temperature are typically contained to	These costs are incorporated into the ongoing operational activities and cost base of the group. As an example, BAW has spent over R1m on improving efficiencies on HVAC units in the reporting year. This cost was incorporated into the ongoing operating costs of the group.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>or communities move outside of BAW's distribution areas. Five potential impacts were identified: 1. Increased operational cost. 2. Increased capital cost. 3. Reduced demand for goods / services. 4. Inability to do business. 5. Wider social disadvantages. The most significant of these impacts was assessed as "Reduced demand for goods/ services".</p>							<p>specific region/s and impacts specific operations over different timescales. Close relationships with principals and customers enable BAW to understand the needs of customers and the risks to which they are currently or are likely to be exposed and to respond accordingly. The impact is further mitigated by on-going monitoring and a robust strategic planning process.</p>	
Change in precipitation extremes and droughts	<p>Flooding could damage company infrastructure, stock and negatively affect operations including field servicing, operation of plant, equipment and vehicles.</p>	<p>Reduced demand for goods/services</p>	<p>3 to 6 years</p>	<p>Direct</p>	<p>Likely</p>	<p>Medium</p>	<p>Inherent risk value of below R100 million and a residual risk value of below R30 million.</p>	<p>BAW insures for any physical and consequential damages. All BAW facilities maintain business plans that incorporate emergency</p>	<p>Significant insurance cover is provided at group level which extends to physical damage and consequential damages. The</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>Drought would also negatively affect operations through water shortages, water price increases and operational inconvenience. Both flooding and droughts may require expenditure on infrastructure to overcome related difficulties. If severe, they may ultimately require changes to existing business model or relocation. Flooding and droughts could increase insurance premiums which would increase the cost base of the company. Floods and droughts can have a significant impact on the agricultural industry resulting in crop damage and shifting arable land areas. This could result in a reduction in demand for BAW's agricultural</p>							<p>response actions and business continuity. The geographic diversification of BAW and its supply chains minimises this risk as flooding and droughts are typically confined to specific regions at any given time. Industry diversification is also another method of managing the risk. BAW operates across a number of industry segments which spreads the risk and reduces the impact associated with floods and droughts on the group.</p>	<p>costs of this insurance was approximately R31 million.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>products. Similarly, these would also impact the group's supply chains and customers negatively affecting demand and supply. Four potential impacts were identified: 1. Increased operational cost. 2. Increased capital cost. 3. Reduced demand for goods / services. 4. Inability to do business. The most significant of these impacts was assessed as "Reduced demand for goods/ services".</p>								
Uncertainty of physical risks	<p>Uncertainty surrounding physical risks creates uncertainty in the business environment. This results in a cautious approach and the inability to firmly commit to business decisions already taken or business</p>	Reduced demand for goods/services	3 to 6 years	Direct	Unlikely	Medium-high	<p>Inherent risk value of below R75 million and a residual risk value of below R35 million.</p>	<p>BAW insures for any physical and consequential damages. All BAW facilities maintain business plans that incorporate emergency response actions and business continuity. Close</p>	<p>Significant insurance cover is provided at group level which extends to physical damage and consequential damages. The cost of this insurance was approximately</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>decisions to be taken on issues such as competitive products, services and customer offerings, sectors in which to operate, business models and optimal locations. This cautious approach is adopted not only by BAW but by its principals and customers as well resulting in an inability of medium to long term decision making, eg. strategic direction, selection of product ranges, strategic partnerships, etc. The uncertainty as to the timing and extent of extreme weather events could also result in increased insurance premiums. The diversified nature and location of BAW's operations requires that the group monitors</p>							<p>relationships with leading world class principals and the diversified nature of the group also reduce the impact of the risk. Ongoing engagement with customers allows BAW to understand customer and address concerns in an uncertain environment.</p>	<p>R31 million. Costs associated with mitigation controls are not ring-fenced but incorporated into ongoing activities, revenue and cost bases of BAW companies.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	physical risks and implements mitigation measures across a number of geographies, resulting in increased costs. Four potential impacts were identified: 1. Increased operational cost. 2. Increased capital cost. 3. Reduced capital availability. 4. Reduced demand for goods / services. The most significant of these impact was assessed as "Reduced demand for goods/services".								
Change in mean (average) precipitation	Water is required for washing and cleaning of equipment, plant and motor vehicles. Changes in mean (average) precipitation levels could result in shortages and consequential price increases of water	Increased operational cost	3 to 6 years	Direct	Likely	Low-medium	Inherent risk value of below R50 million and a residual risk value of below R15 million.	BAW insures for any physical and consequential damages. Apart from insuring for any physical damages resulting from changes in precipitation, the group continues to implement	BAW insurances includes physical damage associated with changes in mean (average) precipitation levels, for example floods and droughts. The cost of this insurance was

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>which could increase operational costs. Investment in water storage and treatment infrastructure to alleviate the impact of water shortages. Water shortages will impact on BAW's ability to clean vehicles and equipment which may impact on customer satisfaction and result in reduced demand. Changes in mean precipitation levels and resulting floods or droughts could impact on BAW's customers, including mining operations, impacting on the demand for goods/services. Increased precipitation may negatively affect safety levels and increase vehicle collisions which could increase</p>							<p>water reduction initiatives to curb the impact of water shortages and potential price increases. In FY2013, BAW recycled 14.3% of the billed water used in the group. BAW maintains close relationships with customers and principals. This allows BAW to understand customers' exposure and requirements as well as to collaborate with principals to adapt products to address customers' needs.</p>	<p>approximately R31 million. BAW has invested significantly in water recycling and rainwater harvesting systems. For example, one Motor Retail dealership spent a total of R524 223 in improving water-use efficiency and to reduce water withdrawal from the municipal water supply.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>insurance premiums. Four potential impacts were identified: 1. Increased operational cost. 2. Increased capital cost. 3. Reduced demand for goods / services. 4. Inability to do business. The most significant of these impacts was assessed as "Increased operational cost".</p>								
Snow and ice	<p>Severe snow and ice as a result of climate change could result in unsafe working environments and ultimately stop operations. Temperatures below safe operating ranges for plant, equipment and vehicles could halt operations. Severe snow and ice could result in increased expenditure on energy and</p>	Increased operational cost	Up to 1 year	Direct	More likely than not	Low-medium	Inherent risk value of below R50 million and a residual risk value of below R10 million.	BAW insures for any physical and consequential damages. All BAW facilities maintain business plans that incorporate emergency response actions and business continuity. Close relationships with leading world class principals and the geographical and industry diversification of	Significant insurance cover is provided at group level which extends to physical damage and consequential damages. The cost of this insurance was approximately R31 million.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>equipment required for heating and defrosting. Customers would be similarly affected. These would also impact BAW's supply chains negatively affecting supply with concomitant restraints on BAW's ability to provide its integrated customer solutions. Frequent snow and ice may negatively affect safety levels and increase vehicle collisions which could increase insurance premiums. In extreme cases, snow and ice could lead to death and/or physical disability of employees or third parties. Four potential impacts were identified: 1. Increased operational cost. 2. Increased capital cost. 3. Reduced demand for goods /</p>							<p>the group reduces the impact of the risk as snow and ice are typically contained to specific region/s and impacts only on specific operations.</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	services. 4. Inability to do business. The most significant of these impacts was assessed as "Increased operational cost".								
Tropical cyclones (hurricanes and typhoons)	Cyclones and other extreme weather events would cause physical damage to facilities, result in unsafe working environments and ultimately stop operations. Customers would be similarly affected. BAW's supply chains could also be impacted; negatively affecting supply with concomitant restraints on the group's ability to provide its integrated customer solutions. Weather events can have a direct and indirect cost for the group. For example, a hailstorm can damage	Inability to do business	Up to 1 year	Direct	Likely	Low	Inherent risk value of below R25 million and a residual risk value of below R10 million. Hail is an example of an extreme weather event. Hail damage from one specific hailstorm in South Africa resulted in some R5 million in repair costs for the rental fleet.	BAW insures for any physical and consequential damages. All BAW facilities maintain business plans that incorporate emergency response actions and business continuity. Close relationships with leading world class principals and the geographical and industry diversification of the group reduces the impact of the risk as it is typically contained to specific region/s	Significant insurance cover is provided at group level which extends to physical damage and consequential damages. The cost of this insurance was approximately R31 million.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>infrastructure and vehicles resulting in expenditure on repairs. A hailstorm would also damage vehicles not owned by Avis and require Avis to provide vehicles to customers of insurance companies who have a rental option on their policies. This could result in revenue loss as Avis has rental agreements with insurers which have lower than market rates. In extreme cases, tropical cyclones could lead to death and/or physical disability of employees or third parties. Four potential impacts were identified: 1. Increased operational cost. 2. Increased capital cost. 3. Reduced demand for goods / services. 4. Inability to do business. The most</p>							and impacts specific operations.	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	significant of these impacts was assessed as "Inability to do business".								
Change in temperature extremes	Changes in temperature extremes impacts on working conditions and has safety implications for BAW employees. It could require investment in new HVAC (capital expense) and temperature control equipment to ensure that the employees are able to work in a comfortable and safe environment. This risk will also give rise to more frequent use and maintenance of existing HVAC equipment, resulting in increased operational costs. Three potential impacts were identified: 1. Increased	Increased operational cost	3 to 6 years	Direct	Likely	Low	Inherent risk value of below R25 million and a residual risk value of below R10 million.	BAW manages the risks of increased costs associated with the need for additional air-conditioning by installing and maintaining energy efficient and adequate HVAC units in its operations. In terms of mitigating the impact of this risk on the health and safety of its employees, health and safety committees are established across the group. Management consults with the committees with a view to initiate, develop, promote, maintain and review measures	These costs are incorporated into the ongoing cost base of the group. An example is the cost for HVAC units. BAW has spent over R1m on HVAC units in the reporting year. This expenditure formed part of the ongoing operational costs of the business. BAW has spent R507 172 on employee wellness programmes over the reporting period. The expenditure on wellness programmes is also part of the ongoing operating costs of the business

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	operational cost. 2. Increased capital cost. 3. Inability to do business. The most significant of these impacts was assessed as "Increased operational cost".							to ensure the health and safety of all employees and visitors. BAW has employee wellness programmes which provide ongoing health services to employees to ensure that employees' health needs are met.	and are not ring-fenced in terms of climate change.
Sea level rise	Sea level rise could damage harbour infrastructure and disrupt low-lying areas and industries, with negative consequences on BAW's supply chains as significant amount of plant and equipment are transported by sea. Optimal and efficient routes may be affected impacting on BAW competitive advantage. 2	Reduced demand for goods/services	>6 years	Direct	Likely	Low	Inherent risk value of below R25 million and a residual risk value of below R10 million.	The geographic diversification of BAW and its supply chains minimises this risk as it is typically confined to specific regions. BAW operates in 25 countries. Damage to harbour infrastructure usually results from a combination of sea level rise and extreme weather events	No additional costs. These costs are incorporated into the ongoing operational activities and cost base of the group.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	potential impacts were identified: 1. Reduced demand for goods / services. 2. Inability to do business. The most significant of these impacts was assessed as "Reduced demand for goods/ services". Two potential impacts were identified: 1. Reduced demand for goods / services. 2. Inability to do business. The most significant of these impacts was assessed as "Reduced demand for goods/ services".							which generally only occur in one specific region at a given time.	

CC5.1c

Please describe your risks that are driven by changes in other climate-related developments

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
Changing consumer behaviour	Shifts in consumer preference to locally sourced products with a reduced carbon footprint may affect the group's logistics business, as well as other products supplied by group. In addition, there are competitive risks from suppliers who may enter the market with technologies, products and services with greater energy and emission efficiencies or lower impacts on the environment.	Reduced demand for goods/services	3 to 6 years	Direct	Likely	High	Inherent risk value below R450 million and a residual risk value below R45 million.	BAW is widely diversified across products and customers and offers a range of products including a number of low emission technologies. BAW's principals are committed to developing new technologies that meet emission requirements, adapting existing technologies to meet these requirements and assisting customers in reducing their carbon footprints. BAW has also developed offerings in the form of BAW Power which assists customers in managing risks posed by energy security and cost. BAW assists customers in reducing their emissions by introducing hybrid	No additional costs. Costs associated with providing a wide product range and developing new products are incorporated into the ongoing operational activities and cost base of the group. In some cases, the costs associated with developing new products may be covered in the group's 'cost of sales' which was some R52 billion for the reporting period. For example, BAW spent some R27m on hybrids vehicles in 2013FY. These costs are part of the ongoing costs of the car rental business.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
								vehicles in the Avis rental fleet.	
Other drivers	<p>Given growing public awareness on issues such as climate change, environmental stewardship activities need to be an important aspect of employee value proposition in order to attract and retain talent. Insufficient attention to this aspect results in the inability to attract and retain the required talent which could result in a lack of skills and, therefore, the inability to do business. Two potential impacts were identified: 1. Increased operational costs. 2. Inability to do business. The key impact identified for this risk is "Inability to do business".</p>	Inability to do business	Up to 1 year	Direct	Likely	Medium-high	<p>Inherent risk value of below R325 million and a residual risk value of below R30 million.</p>	<p>A key aspect of BAW's employee value proposition is environmental stewardship. BAW is committed to training and upskilling. BAW has a human resources practice which is constantly engaged in ensuring that it manages, retains and recruits the required skills and key talent. In addition, BAW has processes in place to ensure the effective management of risks and opportunities presented by climate change. BAW publishes GHG emissions and actions to reduce the impact of climate change on the organization.</p>	<p>These costs are incorporated in the ongoing salary and recruitment costs as well as training spend. Total training spend in 2013FY was R120m. This includes investment in training staff on climate change.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
								Group employees are encouraged to be part of climate change initiatives through inclusion of climate change aspects in employee scorecards. Consistent and ongoing interaction with stakeholders assists BAW in ensuring that it is meeting expectations and that stakeholders are aware of what BAW is doing to manage the risks presented by climate change.	
Reputation	There may be risks associated with shareholder or public activism arising from climate change issues resulting in financial and reputational risks for companies that might inadvertently fall foul of regulations or	Reduced demand for goods/services	3 to 6 years	Direct	More likely than not	Medium-high	Inherent risk value of below R200 million and a residual risk value of R20 million.	BAW engages with stakeholders on an ongoing basis in order to manage its reputation and to ensure that it is meeting stakeholder expectations. BAW has implemented reporting systems	No additional costs. These costs are incorporated into the ongoing operational activities and cost base of the group. For example, in the 2013FY, the cost incurred for assurance and

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
	<p>public opinion. Reputational damage could negatively affect commercial standing and activity of group as well as its ability to attract and retain key talent. Reputational damage could result in a reduced demand for goods and services. Three potential impacts were identified: 1. Reduced demand for goods / services. 2. Reduced stock price valuation. 3. Inability to do business. The most significant of these impacts was assessed as "Reduced demand for goods/ services".</p>							<p>for climate change data. This data is assured by the group external auditors to provide confidence in the numbers for stakeholders. BAW reports its GHG emissions and management of climate change risks and opportunities to stakeholders. BAW is involved in advertising in the area of sustainability in order to inform stakeholders of its efforts in terms of climate change. BAW represents world class principals that strive to minimise the climate change impacts of their products and services. For example, Caterpillar Inc.'s aspirational 2020 internal and customer goals</p>	<p>sustainability advertising was estimated to be in excess of some R700 000.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
								<p>include a 20% reduction in customer greenhouse gases (GHG's), a 20% increase in customer energy efficiency and a 20% increase in customer materials efficiency by 2020. Staying ahead of developments in the market and representing international leading brands allows BAW to uphold its reputation as a responsible corporate citizen. Additionally, BAW responds to the CDP's Climate Change and Water disclosure questionnaire on an annual basis, which emphasises its commitment to responding responsibly to climate change and to transparent</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
								reporting to its stakeholders.	
Fluctuating socio-economic conditions	<p>A loss of business confidence may result due to climate change events, as financial and social consequences add to inflationary pressures and detrimentally affect morale, standards of living, etc. This would affect demand for BAW's products and services.</p> <p>Changes in human settlement patterns, as well as in financial and insurance markets, could take place as a result of climate change and this would impact on long term strategic decisions such as business models and locations and how capital and human resources are allocated, accessed and</p>	Reduced demand for goods/services	3 to 6 years	Direct	Unlikely	High	Inherent risk value of below R150 million and a residual risk value of below R35 million.	<p>BAW is in constant contact with customers in order to understand the pressures customers are experiencing and to assist in alleviating these pressures and providing solutions that meet customers' needs. Strategic planning processes and scenario planning processes are in place with BAW which also assist in managing this risk. Furthermore, this risk is managed by:</p> <ul style="list-style-type: none"> - Geographic and industry diversification of BAW. BAW operates across 25 countries and has a diverse range of customer offerings across 	No additional costs. These costs are incorporated into the ongoing operational activities and cost base of the group.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
	managed. Two potential impacts were identified: 1. Reduced demand for goods / services. 2. Wider social disadvantages. The most significant of these impacts was assessed as "Reduced demand for goods/ services".							<ul style="list-style-type: none"> - six identified strategic growth segments. - Inflationary pressures can be carefully monitored and managed as appropriate. - Monitor customers' ability to spend and access credit. - Reduce working capital. - Limit capital expenditure and improve cashflow. - Secure adequate committed borrowing facilities. 	
Other drivers	Climate change could increase the spread of disease which could have a negative impact on the health of employees. This could pose a risk to the organisation and would need to be managed through health and safety structures and functions, e.g.	Increased operational cost	3 to 6 years	Direct	More likely than not	Medium	Inherent risk value of below R70 million and a residual risk value of below R10 million.	BAW is actively involved in managing the health and safety of its staff. BAW believes that it is every employee's right to work in a healthy and safe environment. To this end, health and safety committees are established	These costs are incorporated into the ongoing operational activities and cost base of the group. For example, in FY2013, BAW spent R507 172 on employee wellness programmes throughout the

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
	<p>impacts on employee wellness and assistance programmes will need to be considered and addressed. Additional staff costs will also be incurred if the health impacts result in prolonged leave of absence. Similarly, these would also impact the group's supply chains and customers negatively affecting demand and supply. Two potential impacts were identified: 1. Increased operational cost. 2. Wider social disadvantages. The most significant of these (direct) impacts was assessed as "Increased operational cost".</p>							<p>across the group. A number of employee wellness and support programmes are in place, including medical aid schemes and assistance programmes. These programmes will assist in mitigating the health impacts of climate change on staff. BAW Equipment has on-site clinics in South Africa and Spain. Other divisions have appropriate resources. The logistics business has an employee 'wellness line' in place for its South African employees and their families. The corporate office in South Africa has wellness days when employees can undergo a number of health-</p>	<p>group.</p>

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
								<p>related assessments and tests, and receive advice. In Equipment southern Africa, five occupational health personnel provide counselling on various communicable diseases. An occupational health section on their intranet is available to all employees. The employee wellness programmes include access to various counsellors and related professionals on a national basis. BAW engages regularly with employees to determine if there are any concerns that need to be addressed. This allows BAW to put in place systems and processes to</p>	

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
								ensure that staff needs are met.	
Increasing humanitarian demands	Taxes to fund humanitarian needs and CSI/socio-economic development spend could increase as a result of climate change impacts on vulnerable communities. Companies are increasingly being viewed as co-responsible with elected governments for remedying socio-economic problems. Two potential impacts were identified: 1. Increased operational cost. 2. Wider social disadvantages. The most significant of these impacts was assessed as "Increased operational cost".	Increased operational cost	3 to 6 years	Direct	More likely than not	Low-medium	Inherent risk value of below R50 million and a residual risk value of below R15 million.	The group strives to be responsive to the interests and concerns of its local communities. This approach is underpinned by a value-based management philosophy which commits the group to creating sustainable value for all of its stakeholders, including playing a meaningful role in society through active corporate citizenship. Development partnerships are established and investments made in interventions which address the foremost problems in society. Donations are made at various divisional and business unit levels, often	The group allocates a minimum of 1% of its net profits after tax to CSI. In FY2013, BAW spent R16.9m on CSI. This is expected to increase as a result of climate change impacts on vulnerable communities. Whilst CSI spend is quantifiable, the key controls explained above do not result in any additional costs nor are these costs ring-fenced as it is part of the ongoing operational costs.

Risk driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated Financial Implications	Management method	Cost of management
								linked to their communities, industry, products or workplaces. BAW is involved in a number of CSI initiatives and the link between these initiatives and climate change is expected to become increasingly clear over time.	

CC5.1d

Please explain why you do not consider your company to be exposed to risks driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1e

Please explain why you do not consider your company to be exposed to risks driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC5.1f

Please explain why you do not consider your company to be exposed to risks driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Page: CC6. Climate Change Opportunities

CC6.1

Have you identified any climate change opportunities that have the potential to generate a substantive change in your business operations, revenue or expenditure? Tick all that apply

- Opportunities driven by changes in regulation
- Opportunities driven by changes in physical climate parameters
- Opportunities driven by changes in other climate-related developments

CC6.1a

Please describe your opportunities that are driven by changes in regulation

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
General environmental	BAW has the opportunity to	Increased demand for	Up to 1 year	Direct	More likely than not	High	Estimated opportunity	Opportunities are identified	The costs associated

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
regulations, including planning	differentiate from competitors by implementing internal initiatives which reduce emissions and by adapting existing and developing new solutions which assist customers to reduce their emissions. Potential exists for establishment of new business units offering supplementary or complementary products, services and solutions. Three potential impacts were identified for this opportunity: 1. Reduced operational cost. 2. Increased demand for existing goods /	existing products/services					up to R140 million.	through BAW's strategic planning and stakeholder engagement processes. Through association with global leading principals and brands, BAW is able to provide products and solutions with reduced environmental footprint and which assists customers achieve their sustainable development objectives. The group also develops leading integrated customer solutions and offerings including supply chain optimisation and energy efficiency. Examples include: BAW	with developing the opportunities form part of the ongoing costs of the business or are part of the product offering and form part of the normal 'cost of sales' which was R52 billion in the reporting period. For example, 'Green trailers' (Truck and trailer) were designed with improved aerodynamics at a cost of R588000. This cost was incorporated into the operating costs of the business.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>services. 3. New products/ business services. The most significant of these impacts was assessed as "Increased demand for existing goods / services".</p>							<p>Handling's principal, NMHG, whose brands include Hyster, commitment to sustainable development. All its American and European manufacturing facilities have achieved ISO 14001 certification. NMHG produces zero emissions electric trucks and offers lift trucks which operate on cleaner burning alternative fuels such as LPG, CNG and clean diesel. BAW Logistics has developed a 'green trailer' (Truck and trailer) and CAST-CO2 products which respectively increase fuel and emission</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								efficiency, optimise supply chains and minimise carbon emissions.	
Product efficiency regulations and standards	Customers are increasingly requesting products and solutions which assist them in achieving their energy and emission reduction targets. Supported by its principals, BAW is committed to providing leading products and solutions that enable customers to meet their sustainable development objectives. The increased need for low emitting and energy efficient products could result in	Increased demand for existing products/services	Up to 1 year	Direct	More likely than not	Medium-high	Estimated opportunity up to R140 million.	BAW is constantly evaluating the market and liaising with customers to understand their needs. Driven by the need to meet customer requirements. Avis included hybrid vehicles in its fleet in 2013FY, thus assisting customers to reduce emissions. BAW engages with principals to develop new products and adjust existing offerings to be more efficient. BAW Power focuses on providing customers with	Costs associated with developing the opportunities form part of the ongoing costs of the business or are part of the product offering and form part of the normal 'cost of sales' which was R52 billion 2013FY, eg. BAW spent some R27m on purchasing the new hybrid vehicles. In this specific example, the cost of the new vehicles forms part of the ongoing costs of the car rental business.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>increased demand for BAW's products. Two potential impacts were identified for this opportunity: 1. Increased demand for existing goods / services 2. New products/ business services The most significant of these impacts was assessed as "Increased demand for existing goods / services". Three potential drivers were identified for this opportunity, namely; 1. Air pollution limits. 2. Product efficiency regulations and standards. 3. Fuel/ Energy taxes and regulations. These drivers give rise to the</p>							<p>solutions to their energy security and energy efficiency challenges. BAW acquired a 25% shareholding in re- which is an environmental solutions company. re- focuses on reducing, reusing and recycling waste with the objective of reducing GHG emissions associated with waste disposal. By offering the services of re- to its customers, BAW is assisting customers reduce their GHG emissions. BAW's Logistics business, collaborated with the CSIR</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	similar opportunities and responses.							and other partners in designing a more energy efficient and ergonomic vehicle which can carry a higher payload and be streamlined enough in its design to reduce the fuel consumption and ultimately the emissions (currently projected at 7% reduction per trip, Johannesburg to Durban). A fleet of four similar aerodynamically designed trailers have been added to the logistics fleet. The energy statistics on these additions are not yet available.	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Voluntary agreements	<p>Efforts to meet group's commitments in terms of Energy Efficiency Leadership Network Pledge have given BAW companies a head start in embedding energy efficiency and climate change in policy, strategies and operations. As a result, the group is better informed on climate change issues and is well positioned to engage on existing and emerging climate change regulations. Two potential impacts were identified for this opportunity: 1. Increased demand for existing goods / services. 2.</p>	Reduced operational costs	Up to 1 year	Direct	Virtually certain	Medium	Estimated opportunity up to R35 million.	<p>Being an early signatory to Energy Efficiency Leadership Network Pledge and generally an early adaptor of standards and legislation, the group has a head-start on monitoring, measuring and reporting its emissions. In this way, BAW will be prepared for any mandatory reporting and the introduction of carbon taxes. This could result in a competitive advantage for the group. BAW has implemented and will continue to implement emission reduction activities. This will reduce the</p>	<p>BAW spent over R5m in FY2013 on the implementation of emission reduction activities.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	Reduced operational costs. The most significant of these impacts was assessed as "Reduced operational costs".							group's operational costs and provide a competitive advantage.	
Product labeling regulations and standards	Requirements to include carbon footprint data on product labels would present an opportunity for BAW as most products distributed by the group already carry labels which include this information. Product labelling regulations would assist in addressing threats presented by 'grey goods' which could increase demand for BAW's goods	Increased demand for existing products/services	Up to 1 year	Direct	Virtually certain	Medium-high	Estimated opportunity up to R200 million.	The group is committed to ensuring that all products sold have the certification, labelling, product and service information required by respective local laws. Products are essentially motor vehicles, plant, equipment and related use thereof. In principle, the information and labelling is the responsibility of the Original Equipment Manufacturers (OEMs). This	Costs associated with product labelling is not separately identifiable and are included in group 'cost of sales' of R52 billion.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	and services.							<p>information is conveyed to customers in handbooks, handover procedures and, where appropriate, displayed on the vehicle, plant or equipment. The group strives to ensure that all products have information and labelling as required by the respective local authority's health and safety laws as well as those laws that pertain to safety and health in the mining sector, where applicable. Every product sold into the European Union has to be certified under Conformité Européenne (European</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								Conformity) standards. Information also includes vehicle, plant and equipment operating procedures, maintenance procedures and service intervals and safety.	
Other regulatory drivers	New regulations which require disclosure of information on environmental stewardship, including climate change, may provide opportunities for BAW companies to differentiate from their competitors and gain competitive advantage in, for example, applying for licenses, tenders or finance.	Other: Competitive advantage	Up to 1 year	Direct	Virtually certain	Medium-high	Estimated opportunity up to R140 million.	BAW monitors the development of new regulation and is often part of the consultation process through trade associations or directly through government. The group has implemented a reporting system for climate change and GHG emissions. GHG emission data is assured by the group external auditors to	In the 2013FY, the cost incurred for assurance of non-financial indicators was estimated to be some R0.5m for the financial year.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								ensure accuracy.	
International agreements	Under the second commitment period of the Kyoto Protocol a number of countries made commitments to reduce emissions. Examples include: - South Africa's voluntary commitment to a significant emissions reduction target of 34% by 2020 and 42% by 2025, dependent on technical and financial assistance. - The European Union has a target to reduce GHG emissions by 20% by 2020 off 1990 levels. - Australia committed to a reduction target	Increased demand for existing products/services	3 to 6 years	Direct	Likely	Medium	Estimated opportunity up to R50 million.	BAW is constantly evaluating the market and liaising with customers to understand their needs. Driven by the need to meet customer requirements, Avis' rental fleet consists of hybrid vehicles. In this way, Avis is assisting customers to reduce emissions. BAW engages with principals to develop new products and adjust existing offerings to be more efficient. For example, the new Cat® 349E hydraulic excavator delivers more engine and hydraulic horsepower	Costs associated with developing the opportunities form part of the ongoing costs of the business or are part of the product offering and form part of the normal 'cost of sales' which was R52 billion 2013FY, eg. BAW spent some R27m on purchasing the new hybrid vehicles. In this specific example, the cost of the new vehicles forms part of the ongoing costs of the car rental business.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>of between 5% and 15% by 2020 off 2000 levels. Commitments made by countries under these international agreements are typically pushed down onto business. This may present an opportunity for BAW to develop and sell new products that reduce the impact of these agreements and resulting penalties and taxes on its customer base. In addition this also presents an opportunity for BAW to reduce its emissions internally and thus reduce the impact of any agreements and resulting penalties and</p>							<p>than its predecessor, and averages five percent improved fuel efficiency in typical applications. BAW established a new business unit focused on providing customers with solutions to their energy security and energy efficiency challenges. BAW acquired a 25% shareholding in re- which is an environmental solutions company. re- focuses on reducing, reusing and recycling waste with the objective of reducing GHG emissions associated with waste disposal.</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>taxes on its operational cost. Three potential impacts were identified for this opportunity: 1. Reduced operational cost. 2. Increased demand for existing goods/services. 3. New products/business services. The most significant of these impacts was assessed as "Increased demand for existing goods/services".</p>							<p>By offering the services of re- to its customers, BAW is assisting customers reduce their GHG emissions. BAW's Logistics business, collaborated with the CSIR and other partners in designing a more energy efficient and ergonomic vehicle which can carry a higher payload and be streamlined enough in its design to reduce the fuel consumption and ultimately the emissions (currently projected at 7% reduction per trip, Johannesburg to Durban).</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Renewable energy regulation	Renewable energy regulations which set targets for the inclusion of renewable energy in the fuel mix could enable BAW and its principals to develop new renewable energy products and solutions for customers.	Increased demand for existing products/services	3 to 6 years	Direct	More likely than not	Medium	Estimated opportunity up to R35 million.	BAW is continually engaging with customers in order to understand their needs and requirements. In order to meet these needs, BAW partners with principals in the development of new products or the modification of existing products. BAW represents leading brands and engages with world class principals that are involved in providing solutions that produce energy or use less energy than alternatives on the market. An example is the business established (Barloworld Power) by BAW to assist	The costs to develop new products or adapt existing products are part of the relevant product and equipment offering available from principals and therefore included in normal 'cost of sales', which was R52 billion for the reporting period.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								customers in managing energy consumption and in ensuring energy security. Another example is generators offered by Caterpillar that allow for combined heat and power production. In other words, the engines are used to generate electricity and the waste heat from the engine is used for heating or to generate chilled water.	
Carbon taxes	The introduction of a carbon tax may increase demand for BAW's energy efficient equipment and offerings. In addition, it may present an	Reduced operational costs	Up to 1 year	Direct	Virtually certain	Low-medium	The potential value of the opportunity is R5 million.	Being an early signatory to Energy Efficiency Leadership Network Pledge and generally an early adopter of standards and legislation,	BAW spent over R5m in FY2013 on the implementation of emission reduction activities.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>opportunity for BAW to develop and sell new products that reduce the impact of a carbon tax on its customer base. The introduction of a carbon tax also offers the potential to reduce emissions and energy consumption, reduce operational costs and reduce the impact of the carbon tax. Three potential impacts were identified for this opportunity: 1. Reduced operational cost. 2. Increased demand for existing goods / services. 3. New products/ business services. The</p>							<p>the group has a head-start on monitoring, measuring and reporting its emissions. In this way, BAW will be prepared for any mandatory reporting and the introduction of carbon taxes. This could result in a competitive advantage for the group. BAW has implemented and will continue to implement emission reduction activities. Examples include energy efficient lighting and motion sensors. Other initiatives include the use of natural lighting, light coloured roof sheeting for</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	most significant of these impacts was assessed as "Reduced operational cost".							thermal reflection and initiatives aimed at encouraging behaviour change. These activities and initiatives will reduce the impact of a carbon tax on the group by reducing BAW's emissions.	
Other regulatory drivers	BAW has an opportunity to access international technical assistance and concessionary finance being made available to the private sector to develop solutions to climate change. BAW can use this finance to develop new offerings to assist customers in reducing emissions. Two	Investment opportunities	3 to 6 years	Direct	More likely than not	Low-medium	Estimated opportunity up to R10 million.	For every project identified by the divisional managers or at group level, BAW assesses the project to determine if it meets the requirements of the available funds and incentives. The objective of accessing grants or preferential finance for projects is to build the business case	Developing business cases and monitoring available finance does not have an associated cost (R0) as it is built into the operating costs of the business.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	potential impacts were identified for this opportunity: 1. Investment opportunities. 2. Reduced capital costs. The most significant of these impacts was assessed as "Investment opportunities".							for the initiative. BAW also partners with governmental organisations in the development of new products and services.	
Cap and trade schemes	BAW has the opportunity to participate in the compliance and voluntary carbon markets. Given the geographical diversification of the group, carbon trading opportunities could exist between the various divisions. The development of new market mechanisms is also anticipated and this could present opportunities for	Investment opportunities	>6 years	Direct	More likely than not	Low	Estimated opportunity up to R5 million – this value is not necessarily significant, but should market conditions improve and new market mechanisms be developed, this could change. As such, it may be feasible to access carbon credits in future.	For every emission reduction project, BAW considers the possibility of carbon credits and the business case for accessing these credits for the project. BAW monitors developments with new market mechanisms to see if there are opportunities to monetize the carbon and use the revenue to build the business case.	Developing business cases and monitoring the development of market mechanisms does not have an associated cost (R0) as it is built into the operating costs of the business. BAW has already been involved in the carbon market through the purchase of offsets. Avis spent R1.85m on the purchase of

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	BAW.							Note that the group has adopted the MARSO (Measure, Avoid, Reduce, Switch and Offset) approach to managing its carbon footprint and will consider offset opportunities only after having reduced its emissions.	voluntary carbon credits in FY2013.

CC6.1b

Please describe the opportunities that are driven by changes in physical climate parameters

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Change in mean (average) precipitation	Decreases in available water and water shortages as a result of climate change	Reduced operational costs	Up to 1 year	Direct	Likely	Low-medium	Estimated opportunity up to R15 million. The financial implications of the opportunity	BAW continues to implement initiatives to conserve water and improve water use	The costs are associated with investment in recycling and rainwater harvesting

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>presents an opportunity for the group as its water recycling and water efficiency measures already in place will increase its resilience and reduce its operational costs relative to its competitors. Two potential impacts were identified for this opportunity: 1. Reduced operational cost 2. Increased demand for existing goods / services The most significant of these impacts was assessed as "Reduced operational cost". Two opportunity drivers were identified: 1. Change in mean (average) precipitation 2. Change in</p>						<p>are associated with the cost savings as a result of recycling and rainwater harvesting initiatives. For example, existing rainwater harvesting facilities at one motor retail dealership could potentially save some R50 000 from reduced water withdrawals from billed municipal water sources.</p>	<p>efficiency at its operations. Water monitoring systems are in place at most major sites to allow monitoring of consumption trends, identification of anomalies and mitigation against excessive and/or unnecessary use. BAW is committed to more efficient water consumption through reduced use, increased recycling and water-harvesting initiatives. Rainwater harvesting allows for water to be captured and used on-site and reduces the impact of water shortages or</p>	<p>facilities. For example, one Motor Retail dealership spent a total of R524 223 in improving water-use efficiency and to reduce water withdrawal from the municipal water supply.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	precipitation pattern These drivers give rise to the similar opportunities and responses.							supply interruptions. In FY2013, BAW recycled some 14.3% of billed water used in the group. BAW continues to look for areas of improvement in terms of managing water.	
Change in mean (average) temperature	Shifts in weather and temperature patterns and related effects of these on local ecologies might open up new tourism destinations, increased arable land and new settlements which may open up new territories and markets for the group's products and services.	Increased demand for existing products/services	>6 years	Direct	Likely	Medium-high	Estimated opportunity up to R20 million.	Identification and realisation of opportunities driven by changes in physical climate parameters are embedded in ongoing management activities of group which includes decentralised local attention, as well as group consolidation and review.	Generally these include: costs associated with the identification, assessment and operationalising of new opportunities; additional investment in vehicles, plant and equipment and appropriate water recycling initiatives, and in sourcing and/or up-skilling human resources. These together with costs incurred in developing and offering products and services that address energy

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
									and emission efficiencies are not ring-fenced but part of the ongoing activities and operational cost base.
Change in precipitation extremes and droughts	Flooding could damage infrastructure and droughts could negatively affect communities requiring relocation or development of infrastructure to mitigate effects. These would create a demand for group's equipment and other offerings including BAW's Logistics offering.	Increased demand for existing products/services	3 to 6 years	Direct	Likely	Medium	Estimated opportunity up to R50 million.	Identification and realisation of opportunities driven by changes in physical climate parameters are embedded in ongoing management activities of the group which includes decentralised local attention, as well as group consolidation and review.	Generally these include: costs associated with the identification, assessment and operationalising of new opportunities; additional investment in vehicles, plant and equipment and appropriate water recycling initiatives, and in sourcing and/or up-skilling human resources. These together with costs incurred in developing and offering products and services that address energy and emission efficiencies are not ring-fenced but part of the ongoing activities and operational

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
									cost base.
Snow and ice	Extreme snow and ice events may result in increased demand for BAW's products and services for power generation, repair and replacement of damaged infrastructure, plant and equipment, servicing, clearing and removal. This may positively affect demand for BAW's products and services as the group is well-positioned to provide the required solutions which include vehicles, plant and equipment.	Increased demand for existing products/services	Up to 1 year	Direct	About as likely as not	Medium	Estimated opportunity up to R35 million.	Identification and realisation of opportunities driven by changes in physical climate parameters are embedded in ongoing management of group which includes decentralised local attention, as well as group consolidation and review.	Generally these include: costs associated with the identification, assessment and operationalising of new opportunities; additional investment in vehicles, plant and equipment and appropriate water recycling initiatives, and in sourcing and/or up-skilling human resources. These together with costs incurred in developing and offering products and services that address energy and emission efficiencies are not ring-fenced but part of the ongoing activities and operational cost base.
Other physical climate opportunities	Damaged infrastructure resulting from extreme	Increased demand for existing products/services	1 to 3 years	Direct	Likely	Medium-high	Estimated opportunity up to R150 million.	Identification and realisation of opportunities driven by	Generally these include: costs associated with the identification,

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>weather events such as cyclones will need to be repaired. Damaged plant, equipment and vehicles will need to be replaced. Logistics solutions will be required to facilitate these aspects. In addition, uncertainty surrounding physical risks may create a demand for precautionary expenditure on infrastructure, standby plant and equipment for power generation. This could increase the demand for the group's customer offerings.</p>							<p>changes in physical climate parameters are embedded in ongoing management activities of the group which includes decentralised local attention, as well as group consolidation and review.</p>	<p>assessment and operationalising of new opportunities; additional investment in vehicles, plant and equipment and appropriate water recycling initiatives, and in sourcing and/or up-skilling human resources. These together with costs incurred in developing and offering products and services that address energy and emission efficiencies are not ring-fenced but part of the ongoing activities and operational cost base.</p>
Other physical climate	Sea level rise combined with extreme	Increased demand for existing	>6 years	Direct	Likely	Low	Estimated opportunity up to R10 million.	Identification and realisation of opportunities	Generally these include: costs associated with

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
opportunities	weather events may result in damage to infrastructure, requiring rebuild and repair activity. This may positively affect demand for BAW's products and services as the group is well-positioned to provide the required solutions which include vehicles, plant and equipment.	products/services						driven by changes in physical climate parameters are embedded in ongoing management activities of the group which includes decentralised local attention, as well as group consolidation and review.	the identification, assessment and operationalising of new opportunities; additional investment in vehicles, plant and equipment and appropriate water recycling initiatives, and in sourcing and/or up-skilling human resources. These together with costs incurred in developing and offering products and services that address energy and emission efficiencies are not ring-fenced but part of the ongoing activities and operational cost base.

CC6.1c

Please describe the opportunities that are driven by changes in other climate-related developments

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Changing consumer behaviour	Shifts in consumer preference is arguably impacted by physical evidence of climate change leading to increased demand for more energy and emission efficient products and services. BAW has the opportunity to capitalise on this by continuing to supply required products to the market and by developing new products that meet customers' needs.	Increased demand for existing products/services	3 to 6 years	Direct	Likely	High	Estimated opportunity up to R200 million.	BAW is constantly evaluating the market and liaising with customers to understand their needs. The group engages with principals who have developed a number of energy efficient products. BAW established a Power business unit focused on providing customers with solutions to their energy security and energy efficiency challenges. BAW acquired a 25% shareholding in re- which is an environmental solutions company. re- focuses on reducing, reusing and recycling waste	The costs associated with developing the opportunities form part of the ongoing costs of the business or are part of the product offering and form part of the normal 'cost of sales' which was R52 billion in the reporting period., eg., BAW spent some R27m on purchasing hybrids vehicles in 2013FY. In this specific example, the cost of the new vehicles forms part of the ongoing costs of the car rental business.

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								with the objective of reducing GHG emissions associated with waste disposal. By offering the services of re- to its customers, BAW is assisting customers reduce GHG emissions. BAW has also invested in hybrid Honda Jazz vehicles for the Avis rental fleet. This investment assists customers in reducing emissions.	
Reputation	BAW has the opportunity to gain more market share as a result of protecting their reputation by managing climate change risks and opportunities effectively. This is	Increased demand for existing products/services	Up to 1 year	Direct	More likely than not	Medium-high	Estimated opportunity up to R100 million.	BAW engages with stakeholders on an ongoing basis in order to manage its reputation and to ensure that it is meeting stakeholder	No additional costs. These costs are incorporated into the ongoing operational activities and cost base of the group. For example, in the

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
	<p>further supported by a skills base and products/services which satisfy significant customers in all regions that require the same high standards in their products, levels of service and environmental commitments. It is also supported by its willingness to behave in an ethical and responsible manner to ensure that risks are fairly and equitably managed, in an era where the general trend may be for parties to attempt to avoid or pass-on risks associated with climate change.</p>							<p>expectations. BAW has implemented reporting systems for climate change data. This data is assured by the group external auditors to provide confidence in the data for stakeholders. BAW reports its GHG emissions and management of climate change risks and opportunities to stakeholders. BAW is involved in advertising in the area of sustainability in order to inform stakeholders of its efforts in terms of climate change. BAW represents world class principals that strive to</p>	<p>2013FY, the cost incurred for assurance and sustainability advertising was estimated to be in excess of some R0.7m.</p>

Opportunity driver	Description	Potential impact	Timeframe	Direct/ Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
								<p>minimise the climate change impacts of their products and services. Staying ahead of developments in the market and representing international leading brands allows BAW to uphold its reputation as a responsible corporate citizen. Additionally, BAW responds to the CDP's Climate Change and Water disclosure questionnaire on an annual basis, which emphasises its commitment to responding responsibly to climate change and to transparent reporting to its stakeholders.</p>	

Opportunity driver	Description	Potential impact	Timeframe	Direct/Indirect	Likelihood	Magnitude of impact	Estimated financial implications	Management method	Cost of management
Other drivers	BAW has the opportunity to be part of disseminating best practice in terms of managing climate change risks and opportunities. There are opportunities to expedite information sharing and activities regarding climate change with other companies, non-governmental organisations and government agencies through relevant and appropriate forums.	Wider social benefits	Up to 1 year	Direct	Likely	Low	The opportunity does not have a direct financial value. By sharing best practice, BAW is able to assist other companies and organisations on their journey to manage climate change and reduce emissions. The value is tied up with the learnings that other companies take from BAW's experiences and what BAW receives from other companies.	BAW is involved in a number of trade associations through which it is able to share best practice. One such committee is the National Business Initiative's Energy Efficiency Leadership Network Advisory Committee. Through this committee, BAW is able to share their experience regarding energy efficiency projects and learn from others.	Membership fees are paid for belonging to various trade associations. For example, total spend on membership fees and sponsorships including those to external environmental initiatives to public benefit across the group amounted to some R2.5m in 2013FY.

CC6.1d

Please explain why you do not consider your company to be exposed to opportunities driven by changes in regulation that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1e

Please explain why you do not consider your company to be exposed to opportunities driven by physical climate parameters that have the potential to generate a substantive change in your business operations, revenue or expenditure

CC6.1f

Please explain why you do not consider your company to be exposed to opportunities driven by changes in other climate-related developments that have the potential to generate a substantive change in your business operations, revenue or expenditure

Further Information

Module: GHG Emissions Accounting, Energy and Fuel Use, and Trading

Page: CC7. Emissions Methodology

CC7.1

Please provide your base year and base year emissions (Scopes 1 and 2)

Base year	Scope 1 Base year emissions (metric tonnes CO2e)	Scope 2 Base year emissions (metric tonnes CO2e)
Wed 01 Oct 2008 - Wed 30 Sep 2009	107905	91148

CC7.2

Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

Please select the published methodologies that you use

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

CC7.2a

If you have selected "Other" in CC7.2 please provide details of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

CC7.3

Please give the source for the global warming potentials you have used

Gas	Reference
CO2	IPCC Second Assessment Report (SAR - 100 year)

CC7.4

Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data at the bottom of this page

Fuel/Material/Energy	Emission Factor	Unit	Reference
Diesel/Gas oil	0.07477	metric tonnes CO2e per GJ	Southern Africa Rest of Africa (DEFRA/DECC/GHG 2010), Rest of Africa (DEFRA/DECC/GHG 2010), United Kingdom (DEFRA/DECC/GHG 2010), Europe (DEFRA/DECC/GHG 2010), Australia (Australia Dept of Climate), North America (eia.doe.gov/cneat/electricity/epa), Middle East & Africa (DEFRA/DECC/GHG 2010)
Motor gasoline	0.07069	metric tonnes CO2e per GJ	Southern Africa Rest of Africa (DEFRA/DECC/GHG 2010), Rest of Africa (DEFRA/DECC/GHG 2010), United Kingdom (DEFRA/DECC/GHG 2010), Europe (DEFRA/DECC/GHG 2010), Australia (Australia Dept of Climate), North America (eia.doe.gov/cneat/electricity/epa), Middle East & Africa (DEFRA/DECC/GHG 2010)
Residual fuel oil	0.06858	metric tonnes CO2e per GJ	Southern Africa Rest of Africa (DEFRA/DECC/GHG 2010), Rest of Africa (DEFRA/DECC/GHG 2010), United Kingdom (DEFRA/DECC/GHG 2010), Europe (DEFRA/DECC/GHG 2010), Australia (Australia Dept of Climate), North America (eia.doe.gov/cneat/electricity/epa), Middle East & Africa (DEFRA/DECC/GHG 2010)
Liquefied Natural Gas (LNG)	0.06396	metric tonnes CO2e per GJ	Southern Africa Rest of Africa (DEFRA/DECC/GHG 2010), Rest of Africa (DEFRA/DECC/GHG 2010), United Kingdom (DEFRA/DECC/GHG 2010), Europe (DEFRA/DECC/GHG 2010), Australia (Australia Dept of Climate), North America (eia.doe.gov/cneat/electricity/epa), Middle East & Africa (DEFRA/DECC/GHG 2010)
Natural gas	0.05710	metric tonnes CO2e per	Southern Africa Rest of Africa (DEFRA/DECC/GHG 2010), Rest of Africa (DEFRA/DECC/GHG 2010), United Kingdom (DEFRA/DECC/GHG 2010), Europe (DEFRA/DECC/GHG 2010), Australia (Australia Dept of Climate), North America (eia.doe.gov/cneat/electricity/epa), Middle East & Africa

Fuel/Material/Energy	Emission Factor	Unit	Reference
		GJ	(DEFRA/DECC/GHG 2010)
Electricity	1.03665	metric tonnes CO2e per MWh	Southern Africa (Eskom (2010 AR))
Electricity	0.738	metric tonnes CO2e per MWh	Rest of Africa (DEFRA/DECC/GHG 2010)
Electricity	0.54284	metric tonnes CO2e per MWh	United Kingdom (DEFRA/DECC/GHG 2010)
Electricity	0.487	metric tonnes CO2e per MWh	Europe (DEFRA/DECC/GHG 2010)
Electricity	0.92	metric tonnes CO2e per MWh	Australia (Australia Dept of Climate)
Electricity	0.57831	metric tonnes CO2e per MWh	North America (eia.doe.gov/cneat/electricity/epa)
	0.9143	metric tonnes CO2e per MWh	Middle East & Africa (DEFRA/DECC/GHG 2010)

Further Information

Please refer to attachment for full factors. Also worth noting is that all consumption per the various categories of energy sources, with the exception of electricity, are first converted into Gigajoules using the energy conversion factors (as attached), then multiplied by the relevant carbon emissions factor. Electricity (MWh) consumption is multiplied directly by the respective regional carbon emissions factor to give the carbon emissions (tCO₂e)

Attachments

[https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/InvestorCDP2014/CC7.EmissionsMethodology/barloworld-2013-ghg-conversion-factors.pdf](https://www.cdp.net/sites/2014/29/1529/Investor%20CDP%202014/Shared%20Documents/Attachments/InvestorCDP2014/CC7.EmissionsMethodology/barloworld-2013-ghg-conversion-factors.pdf)

Page: CC8. Emissions Data - (1 Oct 2012 - 30 Sep 2013)

CC8.1

Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Financial control

CC8.2

Please provide your gross global Scope 1 emissions figures in metric tonnes CO₂e

187490

CC8.3

Please provide your gross global Scope 2 emissions figures in metric tonnes CO₂e

80134

CC8.4

Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

No

CC8.4a

Please provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure

Source	Relevance of Scope 1 emissions from this source	Relevance of Scope 2 emissions excluded from this source	Explain why the source is excluded

CC8.5

Please estimate the level of uncertainty of the total gross global Scope 1 and 2 emissions figures that you have supplied and specify the sources of uncertainty in your data gathering, handling and calculations

Scope 1 emissions: Uncertainty range	Scope 1 emissions: Main sources of uncertainty	Scope 1 emissions: Please expand on the uncertainty in your data	Scope 2 emissions: Uncertainty range	Scope 2 emissions: Main sources of uncertainty	Scope 2 emissions: Please expand on the uncertainty in your data
Less than or equal to 2%	Other: Human Error	Scope 1 emissions are independently assured and reporting of emission and underlying energy consumption is monitored, reported at group level and trends are benchmarked quarterly. However, internal audits have identified the risk	Less than or equal to 2%	Other: Human error	Scope 2 emissions are also independently assured and checked as per the process adopted for scope 1 emissions. As with scope 1 emissions, internal audits have identified the risk of capturers at business unit level

Scope 1 emissions: Uncertainty range	Scope 1 emissions: Main sources of uncertainty	Scope 1 emissions: Please expand on the uncertainty in your data	Scope 2 emissions: Uncertainty range	Scope 2 emissions: Main sources of uncertainty	Scope 2 emissions: Please expand on the uncertainty in your data
		of capturers at business unit level misinterpreting units of measure and magnitude of billed energy consumption. Reporting systems have been automated to eliminate any consolidation errors. Ongoing monthly meetings with divisional sustainability champions also provide a platform to highlight any analytical anomalies that may be identified.			misinterpreting units of measure and magnitude of billed energy consumption. Reporting systems and meetings have been put in place with the objective of eliminating any errors.

CC8.6

Please indicate the verification/assurance status that applies to your reported Scope 1 emissions

Third party verification or assurance complete

CC8.6a

Please provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/section reference	Relevant standard	Proportion of reported Scope 1 emissions verified (%)
Limited assurance	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC8.6a/Non-financial Assurance Statement 2013.docx	Page 125 of the Barloworld Integrated report 2013	ISAE3000	100

CC8.6b

Please provide further details of the regulatory regime to which you are complying that specifies the use of Continuous Emissions Monitoring Systems (CEMS)

Regulation	% of emissions covered by the system	Compliance period	Evidence of submission

CC8.7

Please indicate the verification/assurance status that applies to your reported Scope 2 emissions

Third party verification or assurance complete

CC8.7a

Please provide further details of the verification/assurance undertaken for your Scope 2 emissions, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of Scope 2 emissions verified (%)
Limited assurance	https://www.cdp.net/sites/2014/29/1529/Investor CDP 2014/Shared Documents/Attachments/CC8.7a/Non-financial Assurance Statement 2013.docx	Page 125 of the Barloworld Integrated report 2013	ISAE3000	100

CC8.8

Please identify if any data points other than emissions figures have been verified as part of the third party verification work undertaken

Additional data points verified	Comment
Other: Emissions by primary energy source	For the reporting period the following was also verified Fuel consumption (ML), Electricity consumption (MWh), Energy consumption (GJ), including Energy consumption by primary source.

CC8.9

Are carbon dioxide emissions from biologically sequestered carbon relevant to your organization?

No

CC8.9a

Please provide the emissions from biologically sequestered carbon relevant to your organization in metric tonnes CO2

Further Information

Page: CC9. Scope 1 Emissions Breakdown - (1 Oct 2012 - 30 Sep 2013)

CC9.1

Do you have Scope 1 emissions sources in more than one country?

Yes

CC9.1a

Please break down your total gross global Scope 1 emissions by country/region

Country/Region	Scope 1 metric tonnes CO2e
Australia	3090
Europe	6195
Asia Middle East (AME)	274
Russia	2515
Africa	9370
South Africa	166046

CC9.2

Please indicate which other Scope 1 emissions breakdowns you are able to provide (tick all that apply)

By business division

CC9.2a

Please break down your total gross global Scope 1 emissions by business division

Business division	Scope 1 emissions (metric tonnes CO2e)
Equipment and Handling	33044
Automotive and Logistics	154431
Corporate	15

CC9.2b

Please break down your total gross global Scope 1 emissions by facility

Facility	Scope 1 emissions (metric tonnes CO2e)	Latitude	Longitude
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CC9.2c

Please break down your total gross global Scope 1 emissions by GHG type

GHG type	Scope 1 emissions (metric tonnes CO2e)
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CC9.2d

Please break down your total gross global Scope 1 emissions by activity

Activity	Scope 1 emissions (metric tonnes CO2e)
----------	--

CC9.2e

Please break down your total gross global Scope 1 emissions by legal structure

Legal structure	Scope 1 emissions (metric tonnes CO2e)
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Further Information

Page: CC10. Scope 2 Emissions Breakdown - (1 Oct 2012 - 30 Sep 2013)

CC10.1

Do you have Scope 2 emissions sources in more than one country?

Yes

CC10.1a

Please break down your total gross global Scope 2 emissions and energy consumption by country/region

Country/Region	Scope 2 metric tonnes CO2e	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low carbon electricity, heat, steam or cooling accounted for CC8.3 (MWh)
Australia	4111	4469	0
Europe	4236	8680	0
Asia Middle East (AME)	1727	1889	0
Russia	1617	3320	0
Africa	4330	5877	0
South Africa	64113	61846	0

CC10.2

Please indicate which other Scope 2 emissions breakdowns you are able to provide (tick all that apply)

By business division

CC10.2a

Please break down your total gross global Scope 2 emissions by business division

Business division	Scope 2 emissions (metric tonnes CO2e)
Equipment and Handling	25064
Automotive and Logistics	54345
Corporate	725

CC10.2b

Please break down your total gross global Scope 2 emissions by facility

Facility	Scope 2 emissions (metric tonnes CO2e)

CC10.2c

Please break down your total gross global Scope 2 emissions by activity

Activity	Scope 2 emissions (metric tonnes CO2e)

CC10.2d

Please break down your total gross global Scope 2 emissions by legal structure

Legal structure	Scope 2 emissions (metric tonnes CO2e)
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Further Information

Page: CC11. Energy

CC11.1

What percentage of your total operational spend in the reporting year was on energy?

More than 0% but less than or equal to 5%

CC11.2

Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has purchased and consumed during the reporting year

Energy type	MWh
Fuel	702834.00
Electricity	86070.00
Heat	0.00
Steam	0.00
Cooling	0.00

CC11.3

Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

Fuels	MWh
Diesel/Gas oil	601619
Motor gasoline	98650
Residual fuel oil	0
Liquefied petroleum gas (LPG)	752
Liquefied Natural Gas (LNG)	1364

CC11.4

Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor in the Scope 2 figure reported in CC8.3

Basis for applying a low carbon emission factor	MWh associated with low carbon electricity, heat, steam or cooling	Comment
No purchases or generation of low carbon electricity, heat, steam or cooling accounted with a low carbon emissions factor		

Further Information

Page: CC12. Emissions Performance

CC12.1

How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to the previous year?

Increased

CC12.1a

Please identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined) and for each of them specify how your emissions compare to the previous year

Reason	Emissions value (percentage)	Direction of change	Comment
Emissions reduction activities	8.16	Decrease	Emission reduction activities implemented in the reporting year resulted in a decrease in BAW's absolute emissions. BAW invested R5 million in emission reduction activities in the reporting year. Emission reductions from initiatives implemented by Logistics Southern Africa and Head Office cannot be separated out from other activities.
Divestment	5.01	Decrease	Emissions represented by this 5% decrease over 2012, include operations disposed off during the 2012 and 2013 financial years. As these operations were disposed off, the prior year emissions were used as an estimate for the reduced emissions in 2013FY. The following are the disposed operations together with disposal dates: Handling US disposed of on 27 April 2012 Handling UK disposed of on 28 September 2012 Handling Belgium disposed of on 8 May 2013.
Acquisitions	37.50	Increase	BAW acquired the Manline Group in 30 January 2013 and TCS Logistics (Pty) Limited on the 5th of June 2013 which resulted in a significant increase in emissions from the Automotive and Logistics Division. Also contributing to this increase, albeit to a much lesser degree is the inclusion of data from Handling's Agricultural operations in Russia.
Mergers			
Change in output	11.18	Increase	Using a revenue based 'business as usual' calculation, it is estimated that increased activity levels would have resulted in an increase of approximately 11.18% in scope 1 and 2 emissions.
Change in methodology			
Change in boundary			
Change in physical operating conditions			
Unidentified			
Other			

CC12.2

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per unit currency total revenue

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
4.1	metric tonnes CO2e	unit total revenue	20.59	Increase	Our operations generally continue to make good progress towards our aspirational efficiency improvement targets. The increased fuel consumption of our expanding South African Logistics' road transport operations increased energy intensity levels in this business, while our other businesses continue to improve against their respective 2009 baselines. At a consolidated group level, Logistics' consumption and intensity levels impact the group patterns resulting in higher outcomes. It is expected that this trend will continue as the transport aspects of our logistics business continues to expand which may negatively affect progress against our aspirational targets set for the end of our 2014 financial year.

CC12.3

Please describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tonnes CO2e per full time equivalent (FTE) employee

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
13.59	metric tonnes CO2e	FTE employee	32.39	Increase	Business activity and resulting emission levels in the reporting period increased at a faster rate than the employee complement.

CC12.4

Please provide an additional intensity (normalized) metric that is appropriate to your business operations

Intensity figure	Metric numerator	Metric denominator	% change from previous year	Direction of change from previous year	Reason for change
0.0164	metric tonnes CO2e	Other: Rental Days	11	Decrease	BAW recognises that emissions from car rental activities are central to its customer offerings and strives to reduce these by providing fuel efficient vehicles in the fleets and having low-emission and hybrid vehicles available for rent. Car rental operations in South Africa produced 85 918 tCO2e (FY2012: 90 333 tCO2e) of scope 3 emissions, which represents a decrease of 4.89% in absolute emissions from FY2012. However, rental days increased by 7% during the same period. Overall, this represents an 11% improvement in emissions intensity per rental day in FY2013 compared with FY2012 underscoring the efficiency of new technologies and the reduced emissions profile of the rental fleet. Mileage per rental day also impacts this intensity measure.

Further Information

Page: CC13. Emissions Trading

CC13.1

Do you participate in any emissions trading schemes?

No, and we do not currently anticipate doing so in the next 2 years

CC13.1a

Please complete the following table for each of the emission trading schemes in which you participate

Scheme name	Period for which data is supplied	Allowances allocated	Allowances purchased	Verified emissions in metric tonnes CO2e	Details of ownership
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CC13.1b

What is your strategy for complying with the schemes in which you participate or anticipate participating?

CC13.2

Has your organization originated any project-based carbon credits or purchased any within the reporting period?

Yes

CC13.2a

Please provide details on the project-based carbon credits originated or purchased by your organization in the reporting period

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
Credit Purchase	Coal mine/bed CH4	Tieling Coal Mine Methane Capture project in China	VCS (Voluntary Carbon Standard)	6564	6564	Yes	Voluntary Offsetting
Credit	Energy efficiency:	Basa Magogo - Light it up	Gold Standard	4259	4259	Yes	Voluntary

Credit origination or credit purchase	Project type	Project identification	Verified to which standard	Number of credits (metric tonnes of CO2e)	Number of credits (metric tonnes CO2e): Risk adjusted volume	Credits cancelled	Purpose, e.g. compliance
Purchase	households	Improved Cooking Technique					Offsetting
Credit Purchase	Energy efficiency: households	Katete Improved cookstoves project, Zambia	VCS (Voluntary Carbon Standard)	1549	1549	Yes	Voluntary Offsetting
Credit Purchase	Wind	Theni Wind Power Project, India	VCS (Voluntary Carbon Standard)	1375	1375	Yes	Voluntary Offsetting

Further Information

Page: **CC14. Scope 3 Emissions**

CC14.1

Please account for your organization's Scope 3 emissions, disclosing and explaining any exclusions

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using primary data	Explanation
Purchased goods and services	Relevant, not yet calculated				These emissions principally include those resulting from the combustion of fossil fuels (consumption of energy) by suppliers in the manufacturing process of products purchased by BAW. The group has not yet formally quantified emissions from its supply

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using primary data	Explanation
					chain, but it appreciates that these could be significant and is starting to consider carbon reporting and management in the supply chain. BAW would work closely with principals to appropriately evolve this over time. These are not currently being included in reporting.
Capital goods	Relevant, not yet calculated				This refers to emissions associated with the manufacturing of the capital equipment (e.g. rental fleets, trucks) of which BAW divisions use to provide logistical service. This equipment has an extended life so that it is regarded as fixed assets. Emissions from this source have not yet been quantified, but could be significant. BAW is starting to consider carbon reporting and management in upstream and downstream activities. Given the diversified nature of the group, this reporting is relatively complex and would commence with significant suppliers with entrenched sustainability practices and reporting.
Fuel-and-energy-related activities (not included in Scope 1 or 2)	Relevant, not yet calculated				This refers to emissions associated with the production of electricity and fuels consumed by BAW. This includes emissions such as those associated with the mining of coal to produce electricity that is used by BAW and the refining of liquid fuel used (petrol and diesel). These emissions are not being quantified currently, but it is anticipated that they may be significant.
Upstream transportation and distribution	Relevant, not yet calculated				This includes emissions from the transportation of goods purchased/acquired by BAW, e.g. the transportation of equipment and vehicles from the supplier to BAW's sites. These emissions are not being quantified currently, but it is anticipated that they may be significant. BAW is starting to consider carbon reporting and management in upstream and

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using primary data	Explanation
					downstream activities. Given the diversified nature of the group, this reporting is relatively complex and would commence with significant suppliers with entrenched sustainability practices and reporting.
Waste generated in operations	Relevant, not yet calculated				This relates to the emissions generated in the group's waste disposal activities. The group recycled 4 188 kg of paper and 162854 kg of tyres in FY2013 which represents a significant increase in material recycled from FY2012. For indicative purposes; recycling of 1 kg of cardboard results in the avoidance of 0.38 tCO2e.
Business travel	Relevant, calculated	7315	The methodology followed to estimate the emissions involve multiplying activity data for mode of transport (e.g. km travelled) by an applicable emission factor for that mode of transport (e.g. tCO2e/km). The mode of transport included in the reported figure is limited to business travel using aircraft. The GHG Protocol Corporate Value Chain Accounting and Reporting Standard is used.	100.00%	The emissions associated with business travel include those from the combustion of the fuels consumed in road and air business travel. Currently only business air travel is reported.
Employee commuting	Relevant, not yet calculated				Employee commuting emissions include those associated with the travel of employees between their homes and work from employee-owned vehicles and public transport. These have not been estimated to date.
Upstream leased assets	Relevant, not yet calculated				The majority of these emissions are already appropriately included in BAW's direct carbon footprint.
Downstream transportation and distribution	Relevant, not yet calculated				This includes emissions from the transportation of goods sold by BAW, e.g. the transportation of equipment and vehicles to customers' sites. These emissions are not being quantified currently, but it is anticipated that they may be significant. BAW is starting to consider carbon reporting and

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using primary data	Explanation
					management in upstream and downstream activities. Given the diversified nature of the group, this reporting is relatively complex and would commence with significant suppliers with entrenched sustainability practices and reporting.
Processing of sold products	Not relevant, explanation provided				BAW is a distributor of leading global brands. Accordingly, there is no processing of sold goods.
Use of sold products	Relevant, calculated	85918	These emissions are from the combustion of fossil fuels in the use phase of the BAW product. The emissions would be estimated by multiplying an activity data (e.g. either consumption of fuel or km travelled) by an appropriate emission factor. The GHG Protocol Corporate Value Chain Accounting and Reporting Standard is used.	100.00%	It is in accordance with the concept of product stewardship to report on the emissions of the product use phase. The emissions currently being reported are for sale of Avis Rent a Car's products, namely, vehicle rentals. The reported figure relates to Avis Rent a Car South Africa only.
End of life treatment of sold products	Relevant, not yet calculated				Not undertaken at present. Component Rebuilds extend life of plant and equipment and mitigate emissions associated with building of new equipment and machinery.
Downstream leased assets	Relevant, not yet calculated				This includes emissions from assets leased by BAW to customers, e.g. leased fleet vehicles, equipment and machinery. These emissions are not quantified currently by BAW as the fuel is purchased and used by the client. However, BAW understands that these emissions may be significant and is engaging with suppliers to develop less emissions-intensive technologies. BAW may consider quantifying these emissions at a later stage.
Franchises	Not relevant, explanation provided				The group has a limited number of franchisees through its Avis operations. The emissions from these operations are considered to be negligible against BAW's total group emissions.

Sources of Scope 3 emissions	Evaluation status	metric tonnes CO2e	Emissions calculation methodology	Percentage of emissions calculated using primary data	Explanation
Investments	Not relevant, explanation provided				BAW has a number of joint ventures. Data from joint venture operations are not consolidated into financial and non-financial reporting since these are not companies over which BAW exercises financial control. The emissions from these operations are not considered to be significant when compared to BAW's total group emissions.
Other (upstream)					
Other (downstream)					

CC14.2

Please indicate the verification/assurance status that applies to your reported Scope 3 emissions

No third party verification or assurance

CC14.2a

Please provide further details of the verification/assurance undertaken, and attach the relevant statements

Type of verification or assurance	Attach the statement	Page/Section reference	Relevant standard	Proportion of Scope 3 emissions verified (%)

CC14.3

Are you able to compare your Scope 3 emissions for the reporting year with those for the previous year for any sources?

Yes

CC14.3a

Please identify the reasons for any change in your Scope 3 emissions and for each of them specify how your emissions compare to the previous year

Sources of Scope 3 emissions	Reason for change	Emissions value (percentage)	Direction of change	Comment
Use of sold products	Change in output	4.89	Decrease	There was an absolute decrease in emissions from 90 333 tCO ₂ e in FY2012 to 85 918 tCO ₂ e in FY2013. The decrease is a reflection of the efficiency of the fleet. Car rental fleets generally include vehicles under 12 months old fitted with the latest technology, resulting in overall energy and emissions efficiency. Avis' rental fleet consisted on average 78 of hybrid vehicles per month for the financial period. Car rental also provides eco-driving tips on hangers in every vehicle.
Business travel	Other: Improved reporting	20.95	Increase	The annual increase in scope 3 emissions from air travel (from 6048 tCO ₂ e in FY2012 to 7315 tCO ₂ e in FY2013) is a reflection of improved reporting and increased business travel, as data for FY2012 was incomplete. The group is continuing to refine this aspect of their reporting.

CC14.4

Do you engage with any of the elements of your value chain on GHG emissions and climate change strategies? (Tick all that apply)

Yes, our suppliers
Yes, our customers

CC14.4a

Please give details of methods of engagement, your strategy for prioritizing engagements and measures of success

BAW represents and engages with leading international Original Equipment Manufacturers (OEMs) and brands such as Caterpillar, Hyster, Avis, Audi, BMW, Ford, General Motors, Mazda, Mercedes-Benz, Toyota, Volkswagen, Massey Ferguson and others. Relationships throughout the supply chain are guided and prioritised by BAW's governance framework that includes its Code of Ethics, Worldwide Code of Conduct, related policies and commitment to legal compliance. Interactions are also informed and prioritised by the group's strategic framework, including the commitment to being a leader in sustainable development and the identification of competitive advantage through offering customer solutions that assist customers in achieving their sustainable development objectives, facilitate a transition to low carbon economies and expand into related opportunities. Methods of engagement include dealer, dealer council and licensee meetings; principals' conferences; formal reporting and information sharing; ongoing informal contact and product launches. BAW engages with all principals on an ongoing basis. The material issues raised during engagements include product issues and innovation; market positioning; financial and other performance review; customer issues and satisfaction; sustainable development and climate change matters; market information and supply chain empowerment. Customers are engaged on an ongoing basis which informs the basis of the group's customer value proposition and integrated solutions. Such engagement includes extensive surveys, personal contact and engagement, site visits and open communication platforms. BAW strives to provide customer solutions that assist customers achieve their own sustainable development objectives including energy and emission efficiency improvements. Success is measured by the outcomes of these engagements. Positive outcomes resulting from engagements include successful relationships with mutual value maximized; leading products, services and customer solutions; retained distribution rights; mitigation of an identified key risk, supply chain optimization and expanded preferential procurement and empowerment. Stakeholder requirements, commercial sensibility, practicability, organisational sustainability and responsible corporate citizenship are some of the aspects considered in prioritizing engagements.

CC14.4b

To give a sense of scale of this engagement, please give the number of suppliers with whom you are engaging and the proportion of your total spend that they represent

Number of suppliers	% of total spend	Comment
		The group engages with a number of suppliers on climate change, of which the most significant are its principals. These include Caterpillar, Hyster, Avis, Audi, BMW, Ford, General Motors, Mazda, Mercedes-Benz, Toyota, Volkswagen, Massey Ferguson and others. BAW's principals account for majority of its upstream scope 3 emissions from its value chain. The group's cost of sales, which includes its

Number of suppliers	% of total spend	Comment
		spend with principals, was some R52bn in the FY2013. BAW has developed strong relationships with its principals which facilitates information sharing about local market conditions and trends, including information on regulatory environments and emission standards, and assists its principals in developing customer solutions that differentiate and expand their product ranges.

CC14.4c

If you have data on your suppliers' GHG emissions and climate change strategies, please explain how you make use of that data

How you make use of the data	Please give details
Managing the impact of regulation in the supply chain	BAW represents leading international brands and principals such as Caterpillar, Hyster, Avis, Audi, BMW, Ford, General Motors, Mazda, Mercedes-Benz, Toyota, Volkswagen, Massey Ferguson and others. Their extensive sustainability reporting and engagement with the group informs its risk management and strategic planning processes, and as it allows for the group to put in place mitigation strategies for material risks, including regulatory risks, in its supply chain.
Managing physical risks in the supply chain	BAW represents leading international brands and principals such as Caterpillar, Hyster, Avis, Audi, BMW, Ford, General Motors, Mazda, Mercedes-Benz, Toyota, Volkswagen, Massey Ferguson and others. Their extensive sustainability reporting and engagement with the group informs its risk management and strategic planning processes, and as it allows for the group to put in place mitigation strategies for material risks, including physical risks, in its supply chain.
Stimulating innovation of new products	BAW represents leading international brands and principals such as Caterpillar, Hyster, Avis, Audi, BMW, Ford, General Motors, Mazda, Mercedes-Benz, Toyota, Volkswagen, Massey Ferguson and others. These leading companies are responsible corporates, which share BAW's commitment to sustainable development and responsible long term value creation for stakeholders. In doing so, they strive to improve energy and emissions efficiencies for both themselves and their customers. BAW collaborates with its principals to provide integrated customer offerings incorporating the latest energy efficient and low emissions technology which mitigates customers' climate change risks, assists them in achieving their environmental stewardship as well as their sustainable development objectives.

CC14.4d

Please explain why you do not engage with any elements of your value chain on GHG emissions and climate change strategies, and any plans you have to develop an engagement strategy in the future

Further Information

Module: Sign Off

Page: CC15. Sign Off

CC15.1

Please provide the following information for the person that has signed off (approved) your CDP climate change response

Name	Job title	Corresponding job category
Christopher Whitaker	Executive: Strategy and Sustainability	Other: Group Executive

Further Information

CDP 2014 Investor CDP 2014 Information Request