

Welcome to your CDP Climate Change Questionnaire 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Royal BAM Group nv is a construction firm with ten operating companies in five European home markets and in niche markets worldwide. BAM's operating companies are active in the business lines Construction and Property, Civil engineering, as well as in Public-private partnerships. The Group has a widespread network of offices, close to its clients. BAM has approximately 18,000 employees and is a listed company at Euronext Amsterdam. It is BAM's mission to build sustainable environments that enhance people's lives by enabling the right people to capitalise on state-of-the-art knowledge, resources and digital technologies, providing solutions across the total construction life cycle for the Group's clients and clients and generating maximum value for its stakeholders. When launching its 2016-2020 strategic programme 'Building the present, creating the future', the Group defined its vision for 2020: By 2020 BAM will be recognised as one of Europe's leading sustainable and innovative construction businesses, with healthy profits and a strong balance sheet, active across the total construction life cycle in European home markets and in selected growing economies worldwide. BAM's vision and unique culture are underpinned by four values which are guiding for the people of BAM. These values are predictable performance, scalable learning, proactive ownership and open collaboration.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years
Reporting year	January 1, 2021	December 31, 2021	No

C0.3

(C0.3) Select the countries/areas in which you operate.

Antarctica
Australia

Belgium
Canada
Germany
Indonesia
Ireland
Netherlands
United Arab Emirates
United Kingdom of Great Britain and Northern Ireland

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

EUR

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Financial control

C-CN0.7/C-RE0.7

(C-CN0.7/C-RE0.7) Which real estate and/or construction activities does your organization engage in?

New construction or major renovation of buildings
Buildings management
Other real estate or construction activities, please specify
Civil engineering

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	NL0000337319

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	<p>The CEO (Chairman of the Executive Committee) oversaw the board and the sustainability strategy and performance in 2021. Sustainability (or Corporate Social Responsibility) is part of the Dutch Corporate Governance Code. The Executive Committee is responsible for reporting material sustainability aspects, including climate related issues and for the performance on sustainability.</p> <p>The Executive Committee, which consists of the CEO, CFO, Chief Operating Officer (COO) Civil engineering, COO Construction and Property, Chief Business Excellence Officer, and Chief HR Officer), defines the sustainability policy including climate issues in consultation with the Director Strategy and the management teams of the operating companies. Meetings with senior management are used to define sustainability and climate issues, and reach agreement on prioritizing objectives, monitoring activities, and reporting results.</p> <p>The Executive Committee, led by the CEO, has the final say in climate-related issues and has the mandate to make key climate-related decisions. An example of a key decision was the Executive Committee's decision to make it mandatory in 2020 for all employees to book flights and hotels via the new travel agent Egencia. This enabled to improve the data quality of CO2 emissions from employee travel (mainly flights) as Egencia provides a live dashboard with key insights in the CO2 footprint , making it easier for BAM Group and the Operating Companies to monitor employee travel trends and steer on CO2 reduction.</p>

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – all meetings	<ul style="list-style-type: none"> Reviewing and guiding strategy Reviewing and guiding annual budgets Reviewing and guiding business plans 	<p>The Executive Committee defines BAM's sustainability strategy, which is part of BAM's company wide strategy, in consultation with the Group Director Strategy and the management teams of the operating companies. The sustainability strategy includes key strategic objectives, goals and targets related to climate related issues (reduction of CO2</p>

	<p>Setting performance objectives</p> <p>Monitoring implementation and performance of objectives</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<p>emissions and carbon intensive resources as well as other climate related risks and opportunities). All these key strategic objectives, goals and targets are translated into Strategic and Operational plans of BAM's operating companies. The Operational plans include annual budgets attached to the actions to achieve these climate related objectives. Meetings between the Executive Committee and senior management of the Operating companies are used to review and guide these Strategic and Operational plans as well as monitor implementation and performance of the objectives, goals and targets that are included in them. This includes quarterly meetings where the operating companies report progress to the Executive Committee and the Group Director Strategy. Critical concerns are reported to the Executive Committee at least in quarterly reports, or whenever more urgency is required. The Executive Committee communicates to the Supervisory Board according planned reporting cycles, or whenever more urgency is required. Sustainability is part of how managers and employees do their day-to-day jobs. It is addressed, for example, at regular work discussions and performance reviews. In this way, climate related issues are assessed across all levels of the Group, from BAM's Executive Committee to its local activities.</p>
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C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

Board member(s) have competence on climate-related issues	
Row 1	Yes

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Responsibility	Frequency of reporting to the board on climate-related issues

Chief Executive Officer (CEO)	Both assessing and managing climate-related risks and opportunities	Quarterly
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	Quarterly

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Sustainability is part of BAM's mission and vision and impact on climate change has explicitly been made part of BAM's key strategic objectives. Responsibility for these strategic objectives lies with BAM's Executive Committee, which consists of the CEO, CFO, Chief Operating Officer (COO) Civil engineering, COO Construction and Property, Chief Business Excellence Officer, and Chief HR Officer). The Executive Committee defines the Sustainability Policy in consultation with the Group Director Strategy and the management teams of the operating companies. The Strategic Plan for climate related issues are an integral part of the 2016-2020 Strategic Agenda. Each year the priorities for the next year are discussed, agreed and monitored as part of the yearly Operating Plans. Action plans and targets are included in a separate Sustainability Operating Plan and in Operating Plans of Operating companies. The Sustainability Operating Plan is prepared and agreed between the Group Director Strategy and senior representatives of each operating company involved in climate-related issues. This is called the Sustainability Community Table within BAM's governance.

Meetings with senior management are used to define sustainability issues and reach agreement on prioritising objectives, monitoring activities, and reporting results. Critical concerns are reported to the Executive Committee at least in quarterly reports, or sooner whenever more urgency is required. The Executive Committee communicates to the Supervisory Board according to planned reporting cycles, or whenever more urgency is required. Safety ambitions, the reduction of CO2 emissions and other climate related issues, waste management and business integrity, apply to all BAM operating companies. In addition, each operating company measures KPIs addressing issues of relevance to its own business. Each operating company has a management team member who has the responsibility for sustainability. The operating companies report progress quarterly to the Executive Committee and the Group Director Strategy together with details of actions taken to support the Group's business objectives. They interpret BAM's objectives based on their unique operating conditions. Sustainability is part of how managers and employees do their day-to-day jobs. It is addressed, for example, at regular work discussions and performance reviews. In this way, climate related issues are assessed across all levels of the Group, from BAM's Executive Committee to its local activities.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	BAM believes providing incentives for the management to reach climate-related targets is key to ensure climate-related issues maintain an important part of BAM's strategy and management.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Board/Executive board	Monetary reward	Emissions reduction project Emissions reduction target	<p>BAM's remuneration policy for the Executive Committee/Board supports both short and long-term objectives, whereas the emphasis is on long-term value creation for Royal BAM Group and its stakeholders. It contributes to this long-term value creation by not only focussing on financial targets but also on non-financial targets such as sustainability. 33 per cent of the long term incentive is linked to sustainability objectives which are relevant for the Group's long term success, these include CO2 emission reduction objectives. Long term incentive is based on two financial objectives and one non-financial objective, being sustainability. The sustainability objective determines one third of the vesting of the conditionally awarded performance shares. From the 2019-2021 Long Term Incentive plan onwards the sustainability objective comprises of three criteria of equal weight, being: BAM's ranking on CDP's climate change A list, carbon intensity reduction and construction and office waste intensity reduction.</p> <p>These objectives and accompanying remuneration are cascaded down through the business to (operating company) senior management teams.</p> <p>The Group Director Strategy is also appraised in a yearly Performance Development Review on key</p>

			performance indicators including CO2 emission reductions, waste reduction and CDP ranking. The yearly Sustainability Operating Plan which is prepared in consultation with the Sustainability Community and agreed by the Executive Committee/Board reflects the yearly implementation plan in order to achieve this desired outcome.
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C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	2	BAM sets a short-term (yearly) strategy and target every year. Besides, strategic targets are set for 2023, which are also considered short term.
Medium-term	2	9	In developing and verifying our science based targets, results of climate change models have been taken into account to set a target for the year 2030, which is considered medium term by BAM.
Long-term	9	29	BAM has a long-term ambition to have a net positive impact on climate change, resources and people by 2050. The long-term horizon is therefore 2030 to 2050.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

Definition of substantive financial or strategic impact at Corporate level:

BAMs vision is translated into specific targets for profit, planet and people. Through all the projects BAM undertakes, one of the most important financial and strategic targets for BAM is an adjusted margin before taxes (PBT) between 2 and 4 per cent. With a yearly revenue of roughly €7.3 billion (2021), BAM's total adjusted result before tax was €278.4 million (2021). In general, BAM defined the financial or strategic impact as substantive when the effect of an

identified risk and/or opportunity is large enough to affect BAMs revenue and/or PBT to a noticeable degree on the short-, medium- and long-term. The quantifiable indicator used to define the impact is defined as the effect on revenue and/or PBT in euros. Climate-related risks and or opportunities are defined as substantive when impact on revenue is larger than €50 million and/or the effect on PBT is larger than 1% of the PBT.

Definition of substantive financial or strategic impact at project level:

At project level, the definition of substantive financial impact depends on the specific risk, contract and technical scope of the specific project. Within BAM Group, climate change risks are part of the operational risks. The climate change risks are taken into account at individual project level in an early development phase (tender phase). For example, the majority of works BAM realizes are design and construct contracts (2-stage tenders). Within these projects, a substantive financial impact of a general risk is defined as 1% of the expected revenue. The quantifiable indicator used to define substantive financial impact is euros. For projects with complex (contract) conditions and extended liability, a substantive financial impact of a general risk / management reserve is defined as 2% of the expected revenue in euros. If the risk-exposure is expected to exceed these percentages, BAM withdraws from the tender.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

More than once a year

Time horizon(s) covered

Short-term

Medium-term

Long-term

Description of process

BAM has two key-processes in place for identifying, assessing and responding to climate-related risks and opportunities:

- 1) ERM process: integrated multi-disciplinary company-wide risk management process focusing on climate-related risks and opportunities on a medium-term and long-term horizon for direct and downstream operations.
- 2) Tender Stage Gate procedure focussing on risks and opportunities at project level on a short-term, medium-term, and long-term time horizon for direct and downstream operations.

Both individual processes are described below:

1) Climate-related risk management is integrated into BAM's multi-disciplinary company-wide risk management process. The objective of this process is to control risks so they can lead to new opportunities, resulting in value creation. BAM's new strategy has a clear focus on continued de-risking and accelerate opportunities for future growth. This strategy is translated in BAM's risk management framework and enables BAM's management to identify, assess and respond to risks.

BAM's risk management framework, established by the Executive Board, covers the approach and responsibilities for risk management across the Company. The Executive Board has defined a strategy which focuses on the business and project portfolio. This focus and underlying strategic objectives and initiatives form the basis for BAM's enterprise risk management. It addresses the Company's strategic, operational (including climate), financial and compliance risks. Risks are assessed and prioritised on their impact and probability and on effectiveness of the controls of risk response in the organisation. The Supervisory Board monitors and advises the Executive Board, which has the overall responsibility for enterprise risk management within the Company.

On behalf of the Executive Board, the Risk and Control Committee coordinates the set-up and effectiveness of the risk management framework. The Risk and Control Committee, chaired by the chief financial officer (CFO), advises the Executive Board on main risks in the context of BAM's risk appetite. Risk assessments are carried out on a quarterly basis (more than once a year) and mitigating actions are defined and monitored.

2) A fundamental part of the BAM risk management framework is the stage gate process, an ongoing process throughout the year. Tenders and projects are guided through various stage gates, based on complexity, size and risk profile. The stage gate process is designed to establish a clear risk profile and to support predictable performance across all BAM's tenders and projects. Expert involvement is arranged to leverage the combined knowledge within the Company, supporting the tender and project in reaching its full potential. The stage gate process follows a governance structure based on risk categorisation, to ensure that each tender and project is reviewed and approved by the proper level of management. Bids for major projects or projects involving exceptional risk are submitted to the Executive Board for ratification and – if necessary – to the Supervisory Board for approval. Apart from the various stage gate assessments, BAM's Internal Audit department performs independent project reviews on selected projects across the Company to review the effectiveness of the project control system and the overall project performance.

Tenderdesk assesses all BAM's tenders that could have a substantive financial or strategic impact. Climate-related risks are identified and assessed by performing a climate-risk scan taking into account short, medium, and long-term horizons. This process takes into account climate-related risks of direct operations (such as floods

during the construction process for projects on or close to the water) and downstream operations (for example by offering climate adaptation solutions to the client).

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	<p>As a construction company, BAM is subject to many regulatory requirements related to climate change, including the Carbon Reduction Commitment Energy Efficiency Scheme (CRC EES) UK and the energy label requirements for homes (in all home markets). These have a direct influence on BAM's products, operations and financial performance. Adhering to the regulations requires investment to align BAM's work processes. Not adhering to the regulations could lead to fines, a damage to BAM's reputation, and losing clients. Due to the significance of such regulations to our business, we closely monitor and assess risks associated with any changes through their inclusion in our enterprise risk management (ERM) process.</p> <p>Risk example: in The Netherlands applications for environmental permits must meet the requirements for nearly zero-energy buildings (NZEB) from January 1st 2021. In 2021, BAM delivered 344 zero-energy buildings.</p>
Emerging regulation	Relevant, always included	<p>Emerging regulations, such as a carbon tax and increased energy label requirements for homes (in the Netherlands) and existing buildings (in the UK), will have direct influence on BAM's products, operations and financial performance. We continually monitor, review, and assess proposed and incoming regulatory change as part of our ERM framework to mitigate and manage potential impacts on our business. During climate risk assessments, the impact of emerging regulation on BAM's business is assessed by (re)evaluating what (future) products and projects might fall under the regulation, what steps need to be made in order to ensure emerging regulation is met and what the consequences are for the financial performance of these projects. Risk type example:</p> <p>Risk example: from the start of 2022, BAM is obligated to report eligibility of its activities on the first two objectives of the EU Taxonomy (Climate Change Adaptation, Climate Change Mitigation). In short to medium term, the reporting requirements will be extended to alignment with the environmental sustainability requirements under all six objectives (previous two, plus Water, Pollution, Circular Economy, and Biodiversity). This EU Taxonomy creates a single language across</p>

		<p>Europe on what it means to be environmentally sustainable. This will be used by investors and other stakeholders to compare BAM with other companies in the construction sector. This emerging regulation has significant impact on BAM's operational and reporting processes as BAM on Group level needs to comply to very specific set of requirements on the six sustainability objectives to show whether BAM's projects, CapEx, and OpEx are environmentally sustainable. A working group has been established that focusses on short term adherence to the emerging regulation and long term strategic implementation in BAM's business processes.</p>
Technology	Relevant, always included	<p>Technologically driven risks are always included in climate-related risk assessments. New technologies that allow for more sustainable solutions in the built environment arise and customer demands with regards to these new technologies change. Not adopting such technologies in operations and products poses the risk of losing customers and market share. BAM identifies these risks by analyzing changing customer demands and by doing market assessments, which are part of BAM's strategy definition process, and in more detail through validations with customers, which are part of BAM's innovation process.</p> <p>Risk example: During 2021, BAM delivered the longest concrete 3D-printed bicycle bridge in the world. The bridge stands in Nijmegen (The Netherlands). Printed bridges are generally built faster than regular bridges, with more flexibility, and room for customization of the design. Furthermore, production is less carbon-intensive, because the 3D-concrete printing technique reduces the volume of concrete needed. BAM's ambition is to, together with partners, develop a new sustainable building method that can be used for more bridges and residential buildings.</p>
Legal	Relevant, always included	<p>Legal risks are always included because failure to comply with legal obligations has significant impact on BAM. These assessments are primarily executed during BAM's Stage Gate process - a key process for identifying and assessing legal, contractual, financial and technical risks in projects. During the Stage Gate process, the contract is reviewed and the risk of potential (climate-related) litigation claims is taken into account.</p> <p>An example of this risk type is the risk of potential climate change (extreme weather) related litigation claims, which is covered in the Stage Gate process, for projects where climate change might play a role. A 2020 case study example of such a project is a framework performance contract ('Gebiedscontract Nat') for the Department of Waterways and Public Works (Rijkswaterstaat) in the Netherlands where flooding risks specifications were part of the contract. During the</p>

		<p>Stage Gate process, the project team assessed if future damage caused by flooding would be allocated to BAM. In consultation with the client, the flooding risk for BAM was mitigated with a contractual solution and change of liability. This way, BAM could meet the requirements specified in the contract and continued tendering for this project. The same Stage Gate process was followed for the extension of a highway (the A15 in the Netherlands). In this case, it turned out that flooding risks would be allocated to BAM, both during construction phase as during operation of the highway. This risk of potential litigation was deemed too high, and consequently the project was cancelled.</p>
Market	Relevant, always included	<p>Market risks are always included in climate-related risks assessment. For BAM, the risk of changing consumer behaviour is a key risk that needs to be continuously assessed and monitored to secure BAMs (future) business.</p> <p>Risk example: BAM notices an increasing demand of prefabricated and modular buildings and the use of renewable materials like wood. In 2021 BAM acquired all shares of Houtindustrie Stam & Landman bv (HSL) en Gevelementen Noord-Holland bv (GNH). SL and GNH are a leading producer of complete, prefabricated wooden facade elements and have been co-makers for BAM for 25 years. This step allows BAM to leverage its expertise in sustainability, digitization, modular and industrial construction activities. In the housing market, activities are shifting from the construction site to prefabrication under controlled conditions. Further integration of the prefabricated modules in the conceptual construction flows enables BAM to scale up faster to sustainable solutions based on the wishes of clients and residents. This is how BAM is responding to the increasing market demand for affordable and sustainable housing.</p>
Reputation	Relevant, always included	<p>Reputational risks are always included in the climate risk assessment. Changing client or community perceptions of BAM's contribution to or detraction from the transition to a lower-carbon possibly impacts whether investors and clients choose BAM as their preferred partner.</p> <p>Risk example: in 2021 an environmental organization in The Netherlands (Milieudefensie) won a lawsuit against oil company Royal Dutch Shell (as of January 2022: Shell plc). The judge demands Shell to reduce its CO2-emissions with 45% in 2030 compared to 2019. As one of the largest construction companies in The Netherlands and the impact of the building sector on the environment, there is a chance that BAM will be approached by similar environmental organizations. The risk for BAM is that these organizations find BAM's targets not ambitious enough, or BAM not being able to achieve its targets. BAM mitigates these risks by adjusting CO2 scope 3 targets and by</p>

		continuing to reduce emissions across the value chain (e.g. transition from using diesel to HVO on construction sites).
Acute physical	Relevant, sometimes included	<p>Acute physical climate risks are taken into account in climate-related risk assessment for projects or operations that can be subject to these risks, such as marine operations in tropical areas (cyclones/storms) and projects in areas with high flooding risks. When not managed properly, acute physical risk types, such as severe weather conditions and/or flooding, can lead to more difficult operating conditions in certain areas of the world (and higher project costs for BAM). For such projects, specific risk and opportunity registers are made and additional design specification reviews are executed to determine and follow-up on the impact of these risks.</p> <p>Risk example: in 2021 BAM completed the Northumberland flood scheme. Work to better protect the town started in August 2020 and included replacing the existing flood defences on the south bank of the River Pont with one continuous sheet piled flood wall. The wall has been built to complement the existing local environment, with a stone effect and complementary colouring, and was created with climate change at the forefront of the design with allowances in the foundations for the walls to be raised in future if needed. Not only are homes and businesses better protected from flooding, but the town has also benefitted from environmental enhancements, with a re-profiling of the river bank to create a natural sloped terrace which has been planted with native river corridor plants, boosting local biodiversity.</p>
Chronic physical	Relevant, sometimes included	<p>Longer-term shifts in climate patterns, e.g. sustained higher temperatures, are relevant risks for BAM because of the potential impact on BAM's operations and the impact on the (design) of projects in BAM's portfolio.</p> <p>Risk example: more demand for climate adaptive solutions by the community, clients, and regulators. An example of a climate adaptive building solution is the implementation of green roofs to improve water drainage, biodiversity and decrease temperature in urban areas. BAM plans to perform Climate Adaptation Scans on all A and B projects from 2024 onwards, and on all projects from 2026 onwards.</p>

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Acute physical

Flood (coastal, fluvial, pluvial, groundwater)

Primary potential financial impact

Decreased revenues due to reduced production capacity

Company-specific description

Climate change can affect weather patterns and increase the severity and number of storms and floods (IPCC). In BAMs home countries in North-West Europe, we see projects where extreme weather events such as storms and floods play a significant role. A significant part of BAMs operations are in delta-areas or on land under or around sea-level. Our business units BAM Infra NL and BAM Nuttall have a significant market share in civil engineering marine-works. For example, BAM is delivering solutions to maintain the resilience of infrastructure systems such as levies and other sea protection structures. The risk to BAM is that part of BAMs operations in these delta areas can be affected significantly by extreme weather events, as storm and floods will lead to a (temporal) stop of construction activities and/or require additional precautions to enable the continuation of the work. Ultimately, this will lead to decreased production capacity, reduced revenues and significant risk-exposure.

Time horizon

Short-term

Likelihood

Very likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

585,200,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Explanation of financial impact figure:

If risks are considered to be too high, BAM needs to withdraw from tenders which leads to missed revenue for BAM. In 2021, 8% of BAMs revenue is comes from construction of water projects. If BAM Group decides to withdraw from 100% of these tenders due to risk of increased severity and frequency of extreme weather events, the potential impact and decrease in revenue will be €585.2 million.

Cost of response to risk

1,900,000

Description of response and explanation of cost calculation

The risk of extreme weather events is taken into consideration during tendering stage to minimize the financial impact of physical risks. At project level, BAM currently takes storm and flood seasons into serious consideration when planning our work. A 2021 case study example where an acute physical flooding risk was identified is the 'Zee & Delta, district Zuid' tender for the Department of Waterways and Public Works (Rijkswaterstaat) in the Netherlands – a €33 million FM/maintenance contract BAM Infra NL was involved in. In this project, flooding risk clauses and obligations during the construction phase were part of the client's contract.

During the Stage Gate process, the project team determined that flooding risks could impact the construction phase. BAM decided to consult with the client as this would potentially lead to a decreased production capacity, reduced revenue and significant risk-exposure. In consultation with the client, the flooding risk for BAM was mitigated with a contractual solution and change of liability. Therefore, BAM could meet the requirements specified in the contract and continued tendering for this project. Alternatively, if the risk/reward balance in projects like this is considered not right, BAM eventually withdraws as the climate-related risks of flooding would potentially lead to decreased production capacity, reduced revenue and significant risk-exposure for BAM.

Explanation of cost calculation: For the Zee & Delta district Zuid tender we applied the Stage Gate process in the tender phase. In 2021, on average 9 full-time equivalent managers were employed in BAMs Tenderdesk team, using an average of €100,000 per FTE per year, the associated total costs are €0,9 million ($€100,000/\text{FTE} \times 9 \text{ FTE} = €0,9 \text{ million}$). Including additional costs for employee travel and IT charges/developments/support the total 2021 budget for the Tenderdesk team was €1,9 million.

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Market

Changing customer behavior

Primary potential financial impact

Decreased revenues due to reduced demand for products and services

Company-specific description

There is an increasing demand for lower-carbon construction materials in construction. Notably in infrastructure, this emphasis is placed on asphalt, particularly in the Netherlands where the density of asphalt roads is particularly high. Our five largest clients in the Netherlands, which cover 80% of our revenue in infrastructure construction in this market, have increased the request for low-impact materials in their projects. The Dutch government is BAM Infra NLs largest customer when it comes to constructing roads and using asphalt. In 2021, 8% of BAM's revenue comes from construction of roads and motorways and 7% to the construction of bridges and tunnels, where environmental costs, including the carbon footprint of materials, was the deciding factor in awarding contracts.

Increasingly, the contractor with the lowest impact of its asphalt mixture is offered the contract. This pushes the market to innovate and develop asphalt mixtures with a lower carbon footprint. We expect the number of tenders with sustainable asphalt requirements in place to increase in coming years. The risk to BAM is that if we do not innovate, we will lose our frontrunner position in asphalt innovation (in the Netherlands). This could lead to a worsened position in relation to our competitors and a loss in won asphalt tenders – ultimately resulting in decreased revenues.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

275,000,000

Potential financial impact figure – maximum (currency)

825,000,000

Explanation of financial impact figure

Explanation of financial impact figure:

The total revenue of infrastructure projects with a significant asphalt scope in 2021 across BAM was approximately €1.1 billion.

If BAM loses 25% - 75% of these significant tenders due to reduced demand for our asphalt products and services, the potential impact will be a decrease in revenue of €1.1 billion * 25% = €275 million to €1.1 billion * 75% = €825 million.

Cost of response to risk

500,000

Description of response and explanation of cost calculation

As of the 1st of January 2021, BAM and Heijmans combined their asphalt production plants in the joint venture AsfaltNu. The production of asphalt is a process that requires large amounts of natural resources and energy. BAM is continuously innovating in the asphalt production process with a dedicated team of experts working at BAM Infra Asphalt in the Netherlands. BAM developed a low-energy asphalt concrete (LEAB). LEAB (Low Energy Asphalt Concrete) is a type of asphalt developed by BAM whose production costs less energy than the production of traditional asphalt, because it is produced at a temperature of 95°C instead of 165°C. Case study example: In 2021, BAM applied 92,615 tonnes of LEAB asphalt from AsfaltNu. This is 11,6% of the total volume of asphalt purchased by BAM Infra Netherlands in 2021 (794,085 tonnes). LEAB is cost effective, as energy costs are reduced, and competitive, as it helps us gain a competitive advantage in tenders by offering a more sustainable alternative. By developing low emission products like LEAB, BAM ensures demand for our products and services. In total, BAM has already applied more than 772,000 tonnes of LEAB-produced asphalt in its projects in the Netherlands, thanks to the close collaboration with clients who are equally convinced of the value of this innovative and sustainable method of asphalt production.

Explanation of cost calculation: estimated costs of sustainability related R&D in the Research & Development Lab at AsfaltNu is €500,000.

Comment

Engagement with partners in the value-chain is key in BAM's risk management method. As of the 1st of January 2021, BAM and Heijmans jointly merged their asphalt plants in a new company called AsfaltNu. Heijmans and BAM are now set to combine their joint know-how, expertise and investments in the field of asphalt production. This will enable both companies to make their asphalt production chain more sustainable and more efficient. AsfaltNu will produce asphalt for both Heijmans and BAM, but also for third parties in the asphalt market. Collaboration offers opportunities to make better use of

the available capacity and to improve the utilization rate of the asphalt plants resulting in an increase of revenue.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of new products or services through R&D and innovation

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

BAM has identified an increasing demand for affordable and sustainable housing in our home markets in the UK and The Netherlands:

The Dutch government has announced in the Residential Building program that 900,000 homes must be built up to and including 2030. Regionally, the aim is for almost forty percent (350,000 homes) of these new homes to be built as affordable owner-occupied homes or rentals.

Similarly, in the UK The Affordable Homes Programme provides grant funding to support the capital costs of developing affordable housing for rent or sale. As the Government's housing accelerator, Homes England will be making available £7.39 billion from April 2021 to deliver up to 130,000 affordable homes by March 2026 – outside of London. The increased demand for affordable and sustainable housing offers opportunities for BAM to increase its market share by offering innovative solutions. Particularly the use of prefabricated and/or modular buildings in combination with use of renewable materials such as timber is identified by BAM as a key opportunity to increase BAM's capacity to offer affordable and sustainable housing.

Time horizon

Short-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

Potential financial impact figure – minimum (currency)

30,000,000

Potential financial impact figure – maximum (currency)

60,000,000

Explanation of financial impact figure

Besides increasing sustainability, prefabricated houses are built at a lower cost per unit and decreases construction time. Therefore, this gives BAM the opportunity to respond to the high demand for housing and increase our market share in The Netherlands. In 2021, BAM Residential Netherlands had a revenue of about €300 million. BAM strives to increase its revenue by 10-20% with help of this innovation, the potential impact figure is between €30 million and €60 million (10% and 20% of €300 million).

Cost to realize opportunity

4,000,000

Strategy to realize opportunity and explanation of cost calculation

In 2021 BAM acquired all shares of Houtindustrie Stam & Landman bv (HSL) en Gevelementen Noord-Holland bv (GNH). HSL and GNH are a leading producer of complete, prefabricated wooden facade elements and have been co-makers for BAM for 25 years. This step allows BAM to leverage its expertise in sustainability, digitization, modular and industrial construction activities. In the housing market, activities are shifting from the construction site to prefabrication under controlled conditions. Further integration of the prefabricated modules in the conceptual construction flows enables BAM to scale up faster to sustainable solutions based on the wishes of clients and residents. This is how BAM is responding to the opportunity of increasing market demand for affordable and sustainable housing.

During this acquisition, BAM performed a purchase price allocation which was finalised in 2021. The goodwill of €4 million is the difference between the consideration transferred and the fair value of the net identifiable assets acquired.

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development of climate adaptation, resilience and insurance risk solutions

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Sea levels are expected to rise by up to 1 meter by 2100 as a result of climate change and so will the demand for infrastructure systems such as levies and other sea flooding protection structures. To maintain the resilience of these systems, it is essential to develop new solutions adapted to a changing climate so that we maintain and expand our competitive position within these markets.

Our business units BAM Infra and Infraconsult + Delta Marine Consultants (DMC) and BAM Nuttall already have a significant market share in BAMs home countries (mainly the United Kingdom and the Netherlands) and a proven track-record in climate-adaptation solutions (civil engineering marine-works). An example of a large climate adaptation project that BAM is currently undertaking is the renovation of the Dutch 'Afsluitdijk', the largest dam in the Netherlands that separates the North Sea from the inner lake 'IJsselmeer'.

With these business departments and experience, BAM is in an excellent position to benefit from this opportunity and increase revenue in civil engineering projects where climate adaptation plays an important role by offering innovative climate adaptation solutions to our clients.

Time horizon

Medium-term

Likelihood

Virtually certain

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

330,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

From 2022 onward there will be €1.3 billion annually available at the Dutch Deltafonds fund for climate adaptation solutions to protect the Netherlands from rising sea levels, such as construction and maintenance of dikes and research. This is significant market potential for BAM. We estimate similar market potential in the UK (national flood defence schemes) at an additional €2 billion. BAM estimates, based on the current share in these markets, that they could achieve a 10% share of this market potential, leading to a financial impact in the form of potential increased revenue of €330 million (0,1 x €3.3 billion).

Cost to realize opportunity

1,900,000

Strategy to realize opportunity and explanation of cost calculation

Over the past 10 years, BAM is seeing a significant pickup in Marine works, of which the vast majority are flood protection projects. In 2021 for example, BAM Nuttall had 111 active Marine works in their tender portfolio of which 33 projects had a revenue of over €500,000 and 8 with a revenue over €5 million. BAM Nuttall expects this portfolio to double between 2020 and 2025 as more of these climate adaptation schemes become active.

A case study example of a significant flood protection project where BAM developed new adaptation solutions to a changing climate is the £100 million BAM Nuttall Boston Barrier project in the UK. In 2020, BAM delivered this scheme ensuring a fully operational barrier that will better protect 14,000 homes from tidal flooding. With this barrier in place, Boston town centre will be better protected against a tidal surge similar to what was experienced in December 2013, when almost 800 properties and business flooded across 55 streets.

Explanation of cost to realize opportunity: For the £100 million BAM Nuttall Boston Barrier project we applied the Stage Gate process in the tender phase. Our Tenderdesk team conducted peer reviews and tender assessment to identify our added value. In 2021, on average 9 full-time equivalent managers were employed in BAM's Tenderdesk team, of which the associated total costs are €900,000 (€100,000 per FTE per year). Including additional costs for employee travel and IT charges/developments/support the total 2021 budget for the Tenderdesk team is €1,9 million.

Comment

BAM's Tenderdesk assesses all BAM's significant tenders (projects regarded as highly complex and/or with a contract value > €45 million). For all significant projects in 2021 the same process was applied. BAM analyses in the tender phase whether a project offers an opportunity for the development of climate adaptation, resilience and insurance risk solutions and to ensure that we apply our climate adaptation experience in a timely setting.

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

Yes, we have a transition plan which aligns with a 1.5°C world

Publicly available transition plan

Yes

Mechanism by which feedback is collected from shareholders on your transition plan

We do not have a feedback mechanism in place, but we plan to introduce one within the next two years

Attach any relevant documents which detail your transition plan (optional)

 bam-2021.pdf

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy
Row 1	Yes, qualitative and quantitative

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices

<p>Transition scenarios IEA B2DS</p>	<p>Company-wide</p>		<p>BAM conducts climate-related scenario analysis in two areas: at Group level to create and improve the perspective of its reduction targets, and at project level, to identify and evaluate the climate change adaptation requirements of the projects BAM constructs. Time horizons covered are short- (0-1 years), medium- (1-10 years) and long-term (10-30 years). Short and medium time horizons are relevant for BAM as they can affect the project portfolio. Long-term horizon is relevant in setting our strategy and assess future climate change resilience of the products BAM delivers.</p> <p>Description of climate-related scenario analyses and results at Group level: BAM has set a science-based target that exceeds the minimum reduction requirements of the construction sector in the 2DS scenario. BAM used the IEA 2DS scenario as this has a proven track record for this type of analysis. The scenario was applied without any alterations to the underlying inputs, assumptions and methods used by the IEA. BAM uses this scenario to explore relevant climate change risks on both medium term (2030) and long term (2050), as these timeframes are both relevant for BAM but ask for a different strategic approach. The results of the analysis show that the effects of climate change of an average global temperature increase of 2 degrees in 2100 are manageable and would not significantly impact our business. BAM continuously monitors these risks and opportunities. The scenario analyses have informed BAMs business objectives and strategy as BAM used the results to set a science-based target for 2030.</p> <p>BAM linked this to its ambition of having a net positive impact on climate change, resources and people by 2050.</p>
<p>Physical climate scenarios RCP 3.4</p>	<p>Company-wide</p>		<p>Description of climate-related physical scenario analyses and results at project level: Within BAM Construct UK, climate scenario modelling is used at project level to inform designs for new buildings and refurbishments to identify potential impacts to building performance, user health, comfort and carbon emissions from future climate change effects. This applies to both risk and opportunities (for BAM and</p>

		<p>clients. This process of climate scenario modelling is applicable to all BAM Construct UK projects that include a design scope.</p> <p>The results of these scenario analyses are directly related to the expected (additional) revenue as a result of design adaptation. The results of the scenario analysis have informed BAMs business that passive climate-based design now is a core part of BAMs design processes. Based on these analyses, recommendations are made to the client for future mitigation strategies or the building design is changed to mitigate the risks. The inputs, assumptions and analytical methods used are based on CIBSE future weather files which draw from UKCIP02 climate projections for historic data and UKCIP09 projections for future weather emissions. Both are considered on a long term horizon (2050 and 2080).</p> <p>A case study example within the Netherlands is the Afsluitdijk engaged with the client pre-tender to discuss a net-zero carbon approach. BAM was aware of the clients' aspiration to become net-zero carbon by 2030 and proposed an alternative design based on future energy use and climate change effects. BAM used modelling to analyze the impact of future weather patterns on energy performance. Results showed that the expected increase in average temperature meant that the initial cooling system was insufficient. Based on these results, it was BAMs proposal to change the climate design (ventilation system and spatial optimization of the building) which won us the €18.5 million project in 2019 and enabled the university to pursue net zero carbon. In 2020 the realization phase of the project started in which validation of the proposed design solutions is a key process. As the Dam is designed to last for a long period of time the design has taken into account a sea level increase of 1m by 2100 (on par with RCP 3.4). By taking into account this 1m sea-level rise the probability of failure of the dam will be well within the boundary conditions of a 1/10.000 year storm event in the future. Making this a resilient and future-proof project.</p>
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C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

- 1) How can we improve sustainability throughout our company and in our projects?
- 2) How resilient are the projects/assets that we deliver in 2030?

Results of the climate-related scenario analysis with respect to the focal questions

1) How can we improve sustainability throughout our company and in our projects?
In 2021 BAM has started to work on a new ambitious sustainability strategy which will be implemented throughout the whole company and is designed together with each segment of the company. In workgroups per sustainability theme, each segment was represented and this way incorporation of each segment is provided. Together we are working on transforming the business to an IEA 2DS scenario. Scenario analysis shows that the demand for low or zero-carbon assets both in the residential and civil sectors in both the Netherlands. By reducing our operational carbon footprint during construction and by designing our products toward low or zero-carbon assets and projects we provide a future for BAM.

2) How resilient are the projects/assets that we deliver in 2030?
Climate adaptation is becoming a major issue in the Dutch construction and property and civil business. Extreme weather conditions and rising sea levels are the most known examples. BAM focuses on offering and building climate adaptation in UK & Ireland and the Netherlands for both residential and civil sectors.
To build resilient assets by 2030 BAM uses physical climate-related scenarios. In 2021 a pilot project with a climate risk scan has started. This scan provided detailed information on the risks opposed by climate change on multiple themes: Draught, heat, precipitation, flooding and subsidence. Based on public historical information provided by the 'climate atlas' a collaboration of the Royal Meteorological Institute, a few engineering companies, some universities and several governmental bodies. This risk scan is based on probability and consequences and shows if climate adaptive measures are necessary at locations where we deliver our project/asset.

An example of these climate-adaptive measures is the designing of the Afsluitdijk based on a 1m sea-level rise to reduce the flood risk:

BAM engaged with the client pre-tender to discuss a net-zero carbon approach. BAM used modelling to analyze the impact of future weather patterns on energy performance. Results showed that the expected increase in average temperature meant that the initial cooling system was insufficient. Based on these results, it was BAMs proposal to

change the climate design (ventilation system and spatial optimization of the building) which won us the €18.5 million project in 2019 and enabled the university to pursue net zero carbon. In 2020 the realization phase of the project started in which validation of the proposed design solutions is a key process. As the Dam is designed to last for a long period of time the design has taken into account a sea level increase of 1m by 2100 . By taking into account this 1m sea-level rise the probability of failure of the dam will be well within the boundary conditions of a 1/10.000 year storm event in the future. Making this a resilient and future-proof project.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	<p>Both climate change risks and opportunities have already influenced BAMs strategy in the business area of products and services. As part of the strategic agenda, BAM is focusing on creating future portfolio within the program 'doing new things'. The time horizon covered within the strategy is short term (2023) and medium term (2030) and long term to be 2030-2050.</p> <p>The most significant risks and opportunities identified are related to an increasing demand for low-carbon products. For BAM, this requires the development of new solutions for new-builts as well as solutions to renovate existing assets. This is a tremendous opportunity for BAM to increase revenue and offer new products and services within growing markets. The identified risks and opportunities have already led to an increased share of low-carbon products and services in 2020.</p> <p>A case study of the most substantial strategic decision BAM made in 2020 is to increase the focus on development of low-carbon products (zero energy homes) in the Dutch Market. In 2018 already, BAM Bouw en Vastgoed (Dutch Construction and Property business unit) was the first company to be awarded full 'NOM' (zero on meter) certification for the design of these dwellings. , our strategy was to further ensure our clients a solid financial and sustainable business case, meaning that efficiency</p>

		<p>improvement will cover the renovation costs. With this strategy, BAM was well-placed to scale-up the building and renovating of low-carbon houses. In 2021, BAM realized 344 'NOM' dwellings with a total representative revenue of €40,2 million in the Netherlands. Since BAM started with realizing 'NOM' dwellings in 2014, 1989 of these dwellings have been delivered by BAM.</p> <p>BAM is also to focus its strategy more to low-carbon products in other markets, such as the UK and Ireland, based on the positive impact this strategic decision already had in the Netherlands.</p>
<p>Supply chain and/or value chain</p>	<p>Yes</p>	<p>Climate-related risks and opportunities in parts of the supply chain have already influenced BAMs strategy in this area. Royal BAM Group spends around 70% of its yearly revenue on procurement of products and services. In general, risks and opportunities in the supply chain are identified at project level. Projects BAM undertakes have a typical time horizon coverage of a short (0-2 years) to medium-term (2-9 years).</p> <p>Typical risks identified with material suppliers in the supply chain (such as aggregate and concrete, steel and glass) are changing regulations and increasing costs and availability of raw materials and energy. This has already influenced BAM's strategy because this led to development of new products, increasing focus on recycled content and life cycle analysis. As part of reducing the dependency on raw materials, BAM is for example continuously innovating in the asphalt production process with a dedicated team of experts working at BAM Infra Asphalt (BIA) in the Netherlands. BAM developed a low-energy asphalt concrete (LEAB), an innovative type of asphalt that requires less energy and fewer natural resources and results in lower CO2 emissions than conventional asphalt.</p> <p>A case study of the most substantial strategic decision BAM made in 2020 is to continue the general risk reserve to cover foreseen and unforeseen (climate) risks. BAM introduced this Group wide Management Reserve in the Tender Stage Gate Baseline in 2019. Depending on the type of work, 1-2% general risk must be included in the project. If BAM consistently implements this across all projects, there is a provision of €70 - €100 million to be able</p>

		to absorb risks of all kinds, including climate-related risks such as increased costs of raw materials.
Investment in R&D	Yes	<p>BAM invests in innovation and R&D to: 1) Create competitive advantage based on innovation, and recurring superior financial returns for shareholders. 2) Improving product and project quality for our clients, and 3) Building a sustainable environment for society in general. Innovation on 'climate change and energy solutions' has been identified as a significant business opportunity for BAM and been made specific as a 'value space' in the 'Building Future Portfolio' aspect of BAM's 2020 strategy. In 2020 R&D and innovation influenced BAM's business and strategy since BAM continued investing in several innovation initiatives at Operating Company level.</p> <p>A case study of one of the most substantial strategic decisions BAM made in 2020 related to investment in R&D is the preparation of the strategic acquisition of Dutch façade producer Houtindustrie Stam & Landman bv (HSL) and Gevelementen Noord-Holland bv (GNH). HSL/GNH (annual turnover €20 million) are leading producers of complete, prefabricated wooden facade elements, and have been trusted suppliers to BAM for 25 years. Royal BAM Group (through its subsidiary BAM Bouw en Vastgoed Specials) will acquire all shares of from the current owners. The acquisition of these trusted partners is part of the strategy that BAM has set out for the coming years. This step allows BAM to leverage expertise and further innovate in sustainability, digitalization, modular and industrial construction. In the Dutch residential building market, activities are shifting from the construction site to manufacturing locations under controlled conditions. Further integrating the prefabricated modules in our innovative design and construction processes ('conceptual building') enables u to scale up our sustainable solutions more quickly to meet the wishes of clients and residents. In this way, BAM is responding to the increasing market demand for affordable homes.</p>
Operations	Yes	Both climate change risks and opportunities have already influenced BAM's strategy and direct operations in 2020. As part of BAM's climate change strategy, BAM has set an Science Based CO2 reduction target in 2019 (medium term, 2030) on top of the short term (2020 and 2023) CO2 reduction targets that already were in place. Driving down

		<p>CO2 emissions in our operations is a key factor in BAM's CO2 reduction targets. The short term reduction targets and BAM's Science Based Target drives CO2 reduction in the short term and medium term time horizon.</p> <p>Every operating company (business unit) produces specific CO2 emissions management and reduction plans to ensure BAM plays its role in mitigating climate change risks, driving down CO2 emissions during operations and to contribute to the realization of (market and reputation) opportunities by improving BAM's sustainability performance. These plans are fully aligned with BAMs Science-Based targets at Group level.</p> <p>The upcoming ambition of the Dutch government to have an emission-free construction site by 2030 has provided us with the opportunity to invest in low-carbon operations. Such as a Pilot using HVO across the UK&I business, ca 1 million litres instead of Diesel with a total reduction of 2.5 kt CO2e. This was a total investment of estimated 95.000 Pounds. (estimated against 10ppl additional costs). Besides the HVO pilot, we are implementing electric equipment such as an electric road roller and an electric asphalt paver.</p>
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C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs	<p>Direct Costs</p> <p>Description of influence related to electrifying company vehicle fleet: The climate-related risk of increasing fossil fuel costs combined with BAM's strategy to reduce CO2 emissions, stimulates BAM to look for opportunities to further reduce its fuel consumption. Two of the key-focus areas for BAM to reduce fossil fuel use of the company vehicle fleet and BAM's asphalt plants. This has a direct impact our financial planning processes on the short (0-2 years) and medium (2-9 years) time horizon. Case study example 1: In 2020, the impact of ongoing engagement with our lease-car supplier to jointly further electrify BAMs fleet resulted in a significant increase in electric vehicles within BAM. In 2020, BAMs total company vehicle fleet consists of 5020 vehicles. Currently, 9.4% of BAMs total vehicle fleet consists of electric vehicles (269 EV and 200</p>

		<p>PHEV). The increase in EV vehicles has influenced our financial planning in 2020 and has already led to an estimated €300,000 reduction in operating costs (reduction of fossil fuel use). With an increasing fuel price and operating costs savings from further electrification this is expected to increase to several 100.000 of euros in the coming years. The potential of further electrifying BAMs complete vehicle fleet is considered to have a high impact on the financial planning process. Increasing the share of EV vehicles ultimately to 100%, the potential reduction in operating costs is an estimated €2.4 M annually (total direct operational cost savings due to complete reduction of fossil fuel use).</p> <p>Case study example 2: Climate related risks have also led to BAM deciding to switch the fuel of the last brown coal-fired asphalt plant to natural gas as of 1st January 2020. The additional operating costs are ca. €100,000 per year due to a higher fuel price of natural gas compared to brown coal. CO2 savings were 982 tons CO2e.</p>
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C3.5

(C3.5) In your organization’s financial accounting, do you identify spending/revenue that is aligned with your organization’s transition to a 1.5°C world?

No, but we plan to in the next two years

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

Intensity target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2017

Target coverage

Company-wide

Scope(s)

Scope 3

Scope 2 accounting method

Scope 3 category(ies)

Category 1: Purchased goods and services

Category 2: Capital goods

Category 3: Fuel-and-energy-related activities (not included in Scopes 1 or 2)

Category 4: Upstream transportation and distribution

Category 5: Waste generated in operations

Category 6: Business travel

Category 7: Employee commuting

Category 8: Upstream leased assets

Category 11: Use of sold products

Category 12: End-of-life treatment of sold products

Category 13: Downstream leased assets

Base year

2017

Base year Scope 1 emissions covered by target (metric tons CO2e)

Base year Scope 2 emissions covered by target (metric tons CO2e)

Base year Scope 3 emissions covered by target (metric tons CO2e)

7,818,750

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

7,818,750

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

100

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

20

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

6,255,000

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

7,610,314

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

7,610,314

% of target achieved relative to base year [auto-calculated]

13.3292406075

Target status in reporting year

Underway

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Target covers our full scope 3 footprint. Scope 3 Categories 9,10,14 and 15 are not included as they are not relevant for BAM (see C6.5).

Plan for achieving target, and progress made to the end of the reporting year

Engaging with suppliers to decrease the emissions together. Also supported by the increasing demand from the market and stakeholders for more ambitious climate plans. The number of buildings/houses built in 2021 was much higher than the year before. That is why the reduction is not as much as could be expected. The areas 'purchased goods and services' and 'use of sold products' contribute most to BAM's scope 3 emissions and the Company engages with suppliers in exploring reduction measures that focus on these areas. Examples are the "betonakkoord", but also legislation will continue to have a large impact on emissions of "use of sold products"

List the emissions reduction initiatives which contributed most to achieving this target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Year target was set

2018

Target coverage

Company-wide

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Market-based

Scope 3 category(ies)

Intensity metric

Metric tons CO₂e per unit revenue

Base year

2015

Intensity figure in base year for Scope 1 (metric tons CO₂e per unit of activity)

22.9

Intensity figure in base year for Scope 2 (metric tons CO₂e per unit of activity)

2.03

Intensity figure in base year for Scope 3 (metric tons CO₂e per unit of activity)

Intensity figure in base year for all selected Scopes (metric tons CO₂e per unit of activity)

24.93

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure

100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure

100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure

% of total base year emissions in all selected Scopes covered by this intensity figure

100

Target year

2030

Targeted reduction from base year (%)

50

Intensity figure in target year for all selected Scopes (metric tons CO₂e per unit of activity) [auto-calculated]

12.465

% change anticipated in absolute Scope 1+2 emissions

50

% change anticipated in absolute Scope 3 emissions

0

Intensity figure in reporting year for Scope 1 (metric tons CO₂e per unit of activity)

12.86

Intensity figure in reporting year for Scope 2 (metric tons CO₂e per unit of activity)

1.68

Intensity figure in reporting year for Scope 3 (metric tons CO₂e per unit of activity)

Intensity figure in reporting year for all selected Scopes (metric tons CO₂e per unit of activity)

14.54

% of target achieved relative to base year [auto-calculated]

83.3533894906

Target status in reporting year

Underway

Is this a science-based target?

Yes, and this target has been approved by the Science Based Targets initiative

Target ambition

1.5°C aligned

Please explain target coverage and identify any exclusions

Science based target for medium term scope 1 and scope 2 emission reduction. Initial target was verified and approved by SBTi in April 2019, and the updated target was verified and classified as 1.5°C aligned by SBTi in July 2021. Scope 3 is covered by BAM's absolute target, which is also part of BAM's verified and approved 1.5°C aligned SBT. According to the scoring methodology this is allowed to receive maximum points: "Please note: If you are reporting a Scope 1 and 2 target that has been approved the by Science Based Targets Initiative, it is possible to report a Scope 3 SBTi approved absolute target in question C4.1a and be awarded points for criteria iii)".

Plan for achieving target, and progress made to the end of the reporting year

BAM's CO2 intensity decreased to 14,5 tonnes per € million of revenue a six per cent reduction compared to 2020. This means BAM is already close to reaching its 2030 reduction target, and likely to meet it more quickly than anticipated. The reduction mainly caused by an increased revenue (partly due to inflation) and ongoing CO2 reduction measures, namely: Electrification of lease fleet, introducing HVO, transformation to renewable electricity and electric/hybrid equipment.

List the emissions reduction initiatives which contributed most to achieving this target

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Target(s) to increase low-carbon energy consumption or production

Net-zero target(s)

Other climate-related target(s)

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number

Low 1

Year target was set

2018

Target coverage

Company-wide

Target type: energy carrier

Electricity

Target type: activity

Consumption

Target type: energy source

Renewable energy source(s) only

Base year

2015

Consumption or production of selected energy carrier in base year (MWh)

83,087

% share of low-carbon or renewable energy in base year

51.3

Target year

2030

% share of low-carbon or renewable energy in target year

100

% share of low-carbon or renewable energy in reporting year

59.8

% of target achieved relative to base year [auto-calculated]

17.453798768

Target status in reporting year

Underway

Is this target part of an emissions target?

Yes, part of Int1

Is this target part of an overarching initiative?

Science Based Targets initiative

Please explain target coverage and identify any exclusions

As part of our science based target for medium term scope 1 and scope 2 emission reduction, the sourcing of 100% renewable electricity was included. Initial target was

verified and approved by SBTi in April 2019, and the updated target was verified and classified as 1.5°C aligned by SBTi in July 2021. There are no exclusions.

Plan for achieving target, and progress made to the end of the reporting year

Bam has acquired a woodworking company in 2021 that was operating fully on non-renewable energy. This will be converted to a renewable energy contract in 2022. The asphalt factory was operating fully on renewable energy, but this is no longer in our scope 1 and 2 emissions so this affects our numbers. All new energy contracts are planned to be based on renewable energy.

List the actions which contributed most to achieving this target

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2015

Target coverage

Company-wide

Target type: absolute or intensity

Intensity

Target type: category & Metric (target numerator if reporting an intensity target)

Waste management
metric tons of waste generated

Target denominator (intensity targets only)

unit revenue

Base year

2015

Figure or percentage in base year

21.6

Target year

2030

Figure or percentage in target year

10.8

Figure or percentage in reporting year

11.6

% of target achieved relative to base year [auto-calculated]

92.5925925926

Target status in reporting year

Underway

Is this target part of an emissions target?

No

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions

As part of BAM's strategy to mitigate climate change it is key to operate more circular. Therefore, BAM has put an ambitious waste reduction target in place. The target covers all the construction and office waste of the entire company.

Plan for achieving target, and progress made to the end of the reporting year

Eliminate wasteful construction practices, and deliver projects that will produce less waste in operation. Promote the circular economy by using products and materials that can easily be maintained, re-used or repurposed in the future, avoiding low grade recycling wherever possible. Procure materials from certified responsible sources.

List the actions which contributed most to achieving this target

C4.2c

(C4.2c) Provide details of your net-zero target(s).

Target reference number

NZ1

Target coverage

Company-wide

Absolute/intensity emission target(s) linked to this net-zero target

Abs1

Int1

Target year for achieving net zero

2050

Is this a science-based target?

Yes, we consider this a science-based target, and we have committed to seek validation of this target by the Science Based Targets initiative in the next 2 years

Please explain target coverage and identify any exclusions

As part of BAM’s strategy 2015-2020, BAM has communicated the ambition to become climate positive (at least net-zero) by 2050. This covers the whole company. BAM considers this target as science-based as science uses 2050 as the ultimate year for setting net-zero targets. Recently BAM has committed to seek validation of its Net-zero target by SBTi.

Do you intend to neutralize any unabated emissions with permanent carbon removals at the target year?

Unsure

Planned milestones and/or near-term investments for neutralization at target year

Planned actions to mitigate emissions beyond your value chain (optional)

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	3	
To be implemented*	4	205
Implementation commenced*	0	0
Implemented*	8	19,375
Not to be implemented	0	0

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Transportation
Company fleet vehicle replacement

Estimated annual CO₂e savings (metric tonnes CO₂e)

585

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

116,500

Investment required (unit currency – as specified in C0.4)

20,000

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Shift to Electric vehicles in the Netherlands and in the UK (Increase of around 85 cars)

Initiative category & Initiative type

Energy efficiency in production processes
Fuel switch

Estimated annual CO₂e savings (metric tonnes CO₂e)

3,384

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

69,840

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

Replacement of regular fuel by HVO. Cost is approximately 20% higher, but at least 75% is paid for by customers.

Initiative category & Initiative type

Energy efficiency in production processes
Electrification

Estimated annual CO2e savings (metric tonnes CO2e)

366

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

150,000

Investment required (unit currency – as specified in C0.4)

430,000

Payback period

1-3 years

Estimated lifetime of the initiative

Ongoing

Comment

Introduction of electric and hybrid machinery and energy efficient full electric site cabins. Investment estimated on account of the appliances involved have increased hire charges and development cost of full electric machinery.

Initiative category & Initiative type

Energy efficiency in production processes
Fuel switch

Estimated annual CO2e savings (metric tonnes CO2e)

821

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Mandatory

Annual monetary savings (unit currency – as specified in C0.4)

800,000

Investment required (unit currency – as specified in C0.4)

750,000

Payback period

<1 year

Estimated lifetime of the initiative

Ongoing

Comment

Entity for savings made by swapping from onsite power generation to grid connections.
Investment is estimated

Initiative category & Initiative type

Energy efficiency in production processes
Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

443

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Mandatory

Annual monetary savings (unit currency – as specified in C0.4)

150,000

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

<1 year

Comment

Cumulative savings made by improvements in plant and equipment such as hybrid plant and process efficiencies using digital construction, better equipment sizing. Investment is estimated

Initiative category & Initiative type

Company policy or behavioral change
Site consolidation/closure

Estimated annual CO₂e savings (metric tonnes CO₂e)

109

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Mandatory

Annual monetary savings (unit currency – as specified in C0.4)

30,000

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

Divestments and consolidation of office portfolio

Initiative category & Initiative type

Waste reduction and material circularity
Product or service design

Estimated annual CO₂e savings (metric tonnes CO₂e)

5,557

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 1: Purchased goods & services

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

500,000

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

Ongoing

Comment

Cumulative improvements to projects relating to purchased goods and services efficiencies. These often occur from design changes BAM has affected and in most cases reduce the volume of materials needed to complete the works.

Initiative category & Initiative type

Transportation
Company fleet vehicle efficiency

Estimated annual CO2e savings (metric tonnes CO2e)

8,110

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 3 category 4: Upstream transportation & distribution

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

1,200,000

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

<1 year

Comment

Transport emissions saved owing to opting for train transport over use of road trucks for High Brooms cutting - 11,200t of spoil was moved in this way. In addition, 800,000t of material was moved by trains rather than trucks at the EKFB Joint Venture mitigating 8.1kt

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	Compliance with regulatory requirements/standards is always considered at project and business unit level. Occasionally, environmental requirements lead BAM to look for additional emission reduction activities.
Employee engagement	BAM's best ideas often come from its employees working on our projects. By engaging with our employees, BAM aims to collect best ideas for CO2 emission reduction activities and apply those in multiple projects to scale up the reduction
Financial optimization calculations	Financial optimization calculations are always used during the tender phase of projects, and often CO2 reduction activities have a financial incentive as well. The best example is connecting construction sites to the grid in an early phase to avoid the use of generators
Partnering with governments on technology development	BAM also partners with governments on technology development in many of the projects BAM runs for (semi-)government organisations.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Group of products or services

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify

Net zero emissions in use phase guaranteed by BAM

Type of product(s) or service(s)

Buildings construction and renovation

Other, please specify

dwellings

Description of product(s) or service(s)

BAM Residential is involved in a programme to refurbish existing homes to net-zero-energy homes in the Netherlands. In 2021, BAM delivered 344 energy neutral homes for a total revenue of ca. €48 million. 121 of these houses were renovation projects which accounted for around €6 million in revenue.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify

Comparing the performance of a net-zero dwelling to reference case consisting of conventional dwellings.

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

Kwh/m²

Reference product/service or baseline scenario used

The average EPC label of existing housing in the Netherlands is label D.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO₂e per functional unit) compared to reference product/service or baseline scenario

2,071

Explain your calculation of avoided emissions, including any assumptions

For renovation of housing we assume that the previous label of housing was label D. With an average fossil use of 270kWh/m² yr. Assumption is that houses will be renovated after approximately 40 years. Average m² per house 40 years ago was around 114m². In total 121 houses were renovated to NOM. So total kWh's saved is $121 \cdot 114 \cdot 270 = 3,724,380$. Conversion factor for grey electricity is 0,556. So total tons of CO₂e is $(3,724,380 \cdot 0,556) / 1000$ is 2,071.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

0.08

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

Yes, a divestment

Name of organization(s) acquired, divested from, or merged with

AsfaltNu

Details of structural change(s), including completion dates

BAM's asphalt plants have been deconsolidated, due to the new joint venture companies established for asphalt production in the Netherlands and Belgium.

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	Yes, a change in boundary	BAM's historic CO2 and energy figures have been adjusted following the deconsolidation of BAM's asphalt plants. As a result, CO2 emissions from asphalt plants fall now under scope 3 instead of scope 1 and 2, and asphalt plants have been removed from BAM's scope 1 and 2 breakdown and baseline (historic data).

C5.1c

(C5.1c) Have your organization's base year emissions been recalculated as result of the changes or errors reported in C5.1a and C5.1b?

	Base year recalculation	Base year emissions recalculation policy, including significance threshold
Row 1	Yes	CO2 emissions from asphalt plants have been removed from BAM's scope 1 and 2 breakdown and baseline (historic data). From 230 to 203 ktonnes in 2015, from 136 to 114 ktonnes in 2020 and a similar deduction for the years 2016-2020.

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

169,974

Comment

Recalculated for the change in boundary due to the deconsolidation of our asphalt plants.

Scope 2 (location-based)

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

32,791

Comment

Recalculated for the change in boundary due to the deconsolidation of our asphalt plants.

Scope 2 (market-based)

Base year start

January 1, 2015

Base year end

December 31, 2015

Base year emissions (metric tons CO2e)

15,054

Comment

Recalculated for the change in boundary due to the deconsolidation of our asphalt plants.

Scope 3 category 1: Purchased goods and services

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

3,306,769

Comment

Scope 3 category 2: Capital goods

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

0

Comment

Included in Scope 3 category 1

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

44,314

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

147,021

Comment

Scope 3 category 5: Waste generated in operations

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO₂e)

87,919

Comment

Scope 3 category 6: Business travel

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO₂e)

13,996

Comment

Scope 3 category 7: Employee commuting

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO₂e)

5,428

Comment

Scope 3 category 8: Upstream leased assets

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO₂e)

0

Comment

Included in Scope 3 category 1

Scope 3 category 9: Downstream transportation and distribution

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO₂e)

0

Comment

As a construction-services business, no product undergoes downstream transportation and distribution. Transportation of manufactured asphalt is not outsourced.

Scope 3 category 10: Processing of sold products

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO₂e)

0

Comment

All products are sold in final form, with no further processing required. Manufactured asphalt is transported and spread without going through further processing.

Scope 3 category 11: Use of sold products

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO₂e)

4,189,100

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

13,943

Comment

Scope 3 category 13: Downstream leased assets

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

10,260

Comment

Scope 3 category 14: Franchises

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

0

Comment

Royal BAM do not operate a franchising business model

Scope 3 category 15: Investments

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

0

Comment

The only investments made by Royal BAM are in their joint ventures. Associated emissions are included under 'downstream leased assets', therefore this category is not applicable.

Scope 3: Other (upstream)

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

0

Comment

All scope 3 emissions are included in the 15 defined categories

Scope 3: Other (downstream)

Base year start

January 1, 2017

Base year end

December 31, 2017

Base year emissions (metric tons CO2e)

0

Comment

All scope 3 emissions are included in the 15 defined categories

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

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

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

94,048

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We are reporting a Scope 2, market-based figure

Comment

Our reporting is both location based and market based. However, BAM's 2030 verified Science Based target, which include scope 2 emissions, is market-based.

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO₂e?

Reporting year

Comment

C6.4

(C6.4) 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?

Yes

C6.4a

(C6.4a) 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

CO₂ emissions from the production of purchased heat, such as city heating

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions from this source

Relevance of market-based Scope 2 emissions from this source (if applicable)

No emissions from this source

Explain why this source is excluded

The CO₂ emissions associated with the purchase of heat are considered insignificant. Therefore, the potential CO₂ emissions are not relevant and are excluded from BAM's overall energy consumption and related carbon emissions disclosure.

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Explain how you estimated the percentage of emissions this excluded source represents

Of the fossil fuel use in offices, less than 2% is estimated to be covered by district heating. This multiplied by the fossil fuel use of the offices is 1177gj. This multiplied with the conversion factor district heating (23,4kg co₂/gj) equals 27,5 ton co₂. And this corresponds with 0.03% of total scope 1+2 emissions. The CDP portal did not allow any decimals to be entered, so we have rounded the figure to 0.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

3,796,130

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Procurement data for BAM is obtained from procurement database (BRAVO) in \$ spend per category. This data is combined with EEIO factors to estimate associated CO₂ emissions and corrected for inflation.

Capital goods

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

60,652

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Contains the upstream emissions of the categories of the procurement database that involves capital goods defined as tangible assets that BAM uses to produce goods and services like buildings, machinery, equipment, vehicles and tools.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

30,008

Emissions calculation methodology

Fuel-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Calculated using energy consumption data for the entire group without any extrapolation. Energy consumption is multiplied by UK Defra emission factors

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

168,299

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Procurement data for BAM is obtained from procurement database (BRAVO) and is multiplied by specific EEIO factors for transportation and distribution.

Waste generated in operations

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

50,243

Emissions calculation methodology

Waste-type-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Calculated based on recorded waste data for the entire group. CO₂ emissions are calculated using WRAP tool emission factors.

Business travel

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

4,017

Emissions calculation methodology

Fuel-based method

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

Please explain

Business travel data for the entire group, covering privately owned cars and air travel. Business travel does not include emissions associated with commuting.

Employee commuting

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

2,460

Emissions calculation methodology

Fuel-based method

Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Emissions associated with commuting are calculated by car using expense claims. This has been complemented with an estimate of emissions associated with commuting by modes other than cars.

Upstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

56,212

Emissions calculation methodology

Spend-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Contains the upstream emissions of the categories of the procurement database that involves leased or rented assets.

Downstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Please explain

As a construction-services business, BAM's final products do not undergo downstream transportation and distribution and are delivered directly to the customer on-site.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Please explain

All products (e.g. buildings, infrastructure) are sold in final form, with no further processing required.

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

3,415,096

Emissions calculation methodology

Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

This covers all buildings built by Royal BAM's Construct and M&E Services arm. Data is available on number of buildings developed in the UK and dwellings in NL, which is combined with building-type-specific benchmark data on energy consumption for NL and certification information from UK. We assume that building lifespan is 75 years for newbuild and 40 years for renovation. Emissions are then calculated and extrapolated by revenue to cover the entire Construct and M&E arm.

We have chosen to exclude emissions associated with the Civil engineering arm of Royal BAM. This sector builds roads, tunnels, locks, dykes, ports, large rail infrastructure, etc. It is not clear how emissions could be estimated for the use of such construction projects, or how such emissions could be reduced.

End of life treatment of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

19,855

Emissions calculation methodology

Hybrid method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Emissions are estimated for all buildings constructed by the Construction and Property business line of Royal BAM. The total area of such buildings is calculated by

extrapolating floor area of buildings completed by Construct UK and BAM Wonen to the Construction property business line, using revenue. Total floor area is then multiplied by a benchmark for mass of demolition waste per m². Mass of demolition waste is then allocated to different waste treatment streams. This is based on the breakdown for Royal BAM's treatment of demolition waste in the current year. Mass of waste in a given treatment stream is multiplied by WRAP emission factors for demolition. These do not include embodied emissions.

Downstream leased assets

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO₂e)

7,341

Emissions calculation methodology

Asset-specific method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Royal BAM has joint ventures which invest capital, lease the building to the user, and return the building at the end of the lease. Associated emissions are not currently reported under scope 1 and 2. BAM gathers energy use information of these assets. CO₂ conversion factors are used to calculate corresponding CO₂ emissions. These emissions are then multiplied by the percentage of the venture owned by Royal BAM. Only data for assets in UK and NL are currently included.

Franchises

Evaluation status

Not relevant, explanation provided

Please explain

Royal BAM does not operate a franchising business model and has no franchises.

Investments

Evaluation status

Not relevant, explanation provided

Please explain

The only investments made by Royal BAM are in their joint ventures. Associated emissions are included in BAM's scope 1 and 2 emissions or in scope 3 category 'downstream leased assets'. As there are no other investments that need to be taken into account, this category is not relevant.

Other (upstream)

Evaluation status

Not relevant, explanation provided

Please explain

BAM's complete value chain is represented by the identified categories and no other relevant categories exist.

Other (downstream)

Evaluation status

Not relevant, explanation provided

Please explain

BAM's complete value chain is represented by the identified categories and no other relevant categories exist.

C-CN6.6/C-RE6.6

(C-CN6.6/C-RE6.6) Does your organization assess the life cycle emissions of new construction or major renovation projects?

	Assessment of life cycle emissions	Comment
Row 1	Yes, both qualitative and quantitative assessment	

C-CN6.6a/C-RE6.6a

(C-CN6.6a/C-RE6.6a) Provide details of how your organization assesses the life cycle emissions of new construction or major renovation projects.

	Projects assessed	Earliest project phase that most commonly includes an assessment	Life cycle stage(s) most commonly covered	Methodologies/standards/tools applied	Comment
Row 1	New construction and major renovation projects meeting certain criteria (please specify) Projects where BAM does the design	Design phase	Whole life	EN 15978 EN 15804 One Click LCA	

C-CN6.6b/C-RE6.6b

(C-CN6.6b/C-RE6.6b) Can you provide embodied carbon emissions data for any of your organization’s new construction or major renovation projects completed in the last three years?

	Ability to disclose embodied carbon emissions	Comment
Row 1	Yes	

C-CN6.6c/C-RE6.6c

(C-CN6.6c/C-RE6.6c) Provide details of the embodied carbon emissions of new construction or major renovation projects completed in the last three years.

Year of completion

2020

Property sector

Other, please specify
Commercial and Education

Type of project

New construction

Project name/ID (optional)

Atlantic Square, Eden Boys School, Leeds University Business School, Q2 Sports Centre, T Zone, Somerton Primary School

Life cycle stage(s) covered

Whole life

Normalization factor (denominator)

Internal building volume

Denominator unit

square meter

Embodied carbon (kg/CO2e per the denominator unit)

1,056.7

% of new construction/major renovation projects in the last three years covered by this metric (by floor area)

12.1

Methodologies/standards/tools applied

EN 15978
One Click LCA

Comment

Bundle consisting of 6 projects completed in the UK, at different points in the last 3 years.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

Yes

C6.7a

(C6.7a) Provide the emissions from biogenic carbon relevant to your organization in metric tons CO2.

	CO2 emissions from biogenic carbon (metric tons CO2)	Comment
Row 1	189.2	Based on 1.291.406 litres 100% HVO and 105.388 litres 50% HVO blend.

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.00001454

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

106,350

Metric denominator

unit total revenue

Metric denominator: Unit total

7,315,281,220

Scope 2 figure used

Market-based

% change from previous year

5.76

Direction of change

Decreased

Reason for change

BAM achieved a scope 1 and 2 CO2 reduction in 2021 compared to 2020, caused by the most important scope 1 CO2 emission reduction activities as reported in C4.3b (electrification of lease fleet, deploying solar/hybrid technologies on construction sites, replacing the use of diesel by certified sustainable HVO).

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

No

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Netherlands	34,739
United Kingdom of Great Britain and Northern Ireland	29,765
Belgium	9,274
Ireland	8,017
Germany	9,395
Other, please specify Rest of the world. BAM International, while dismantled in 2021, was still active in 2020 in Canada, Indonesia, Australia, Antarctica, United Arab Emirates	2,858

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Construction and property	14,648
Civil Engineering	78,813

Public Private Partnerships and Holding	587
---	-----

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Use of offices	3,454
Construction	56,100
Use of vehicles	34,494

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Netherlands	9,194	1,445
United Kingdom of Great Britain and Northern Ireland	4,737	6,471
Belgium	1,045	284
Ireland	1,077	75
Germany	4,651	3,819
Other, please specify Rest of the world. BAM International was active in 2019 in Kenya, Sierra Leone, Tanzania, Indonesia, Australia, Antarctica, Costa Rica, Curacao, United Arab Emirates, Oman, Canada	194	208

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

- By business division
- By activity

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Construction and property	9,307	3,047
Civil Engineering	11,501	9,165

Public Private Partnerships and Holding	90	89
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C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Use of offices	5,042	1,406
Construction	15,299	10,367
Use of vehicles	557	530

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) 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.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	556	Decreased	0.43	The share of renewable electricity consumption increased from 57,9% in 2020 to 59,8% in 2021. The corresponding reduction in CO2 emissions is calculated as follows: The CO2 from grey electricity in 2021 is divided by the grey electricity share in 2021 and then multiplied by the grey electricity share of 2020 (11,763 tons/40,2%*42,1%=12,319 tons). This would have been the CO2 from grey electricity in 2021 if the renewable electricity share would have been equal to 2020. The difference between the 'would have been CO2 from grey electricity in 2021' and the actual CO2 from grey

				<p>electricity in 2021 (11,763 tons-12,319 tons= 556 tons) is the change (decrease) in emissions allocated to the increased share in green electricity in 2020. The relative reduction is calculated by dividing the reduction by the total scope 1+2 emissions of 2020 (-556 ton/128,033 ton * 100%= -0,43%, i.e. a 0.43% decrease in emissions).</p>
Other emissions reduction activities	5,708	Decreased	4.5	<p>These are the savings from the scope 1,2 reduction initiatives implemented in the reporting year as disclosed in C4.3b, e.g. Electrification of lease fleet, introducing HVO, putting in grid connections, and electric/hybrid equipment. In total these savings were 585 + 366 + 3384 + 821 + 443 + 109 = 5708. These savings divided by total emissions of 2020 (5708 / 128,033 = -4.5%, i.e. a 4.5% decrease in emissions).</p>
Divestment	0	No change	0	
Acquisitions	0	No change	0	
Mergers	0	No change	0	
Change in output	9,355	Increased	7.31	<p>Revenue and output increased significantly in 2021 compared to 2020. The relative change in CO2 emissions (emission value) is calculated by dividing the change between the 2021 revenue and the 2020 revenue with the 2020 revenue ((7315Meuro-6817Meuro)/6817Meuro = +7.31%, i.e. an expected 7.31% increase in emissions). The absolute change in scope 1 and scope 2 emissions is calculated by multiplying the relative decrease with the total scope 1 and scope 2 emissions of 2020 (7.31%*105169=7684).</p>
Change in methodology	0	No change	0	
Change in boundary	22,865	Decreased	17.9	<p>CO2 emissions from asphalt plants have been removed from BAM's scope 1 and 2 breakdown. This means that CO2 emissions have decreased in comparison</p>

				to last years Scope 1 + 2 emissions. Total emissions in 202 including the asphalt were 128.033, when leaving out the emissions for asphalt the savings would have been $128.033 - 105.169 = 22.865$. These savings divided by total emissions of 2020 ($22.865 / 128.033 = -17,9\%$, i.e. a 17.9% decrease in emissions)
Change in physical operating conditions	0	No change	0	
Unidentified	238	Decreased	0.19	Unidentified emissions are the sum of smaller emission reduction activities not disclosed in C4.3b and changes in type and phases of projects. The total is the difference of the total scope 1 + 2 emissions reduction disclosed and the sum of the other changes in this table ($21683 - (556 + 5708 - 7684 + 22865) = 238$. The relative change is calculated by dividing the total by the total 2020 scope 1 + 2 emissions ($= -238 / 128033 \text{ton} * 100\% = -0.19\%$, i.e. a 0.19% decrease in emissions).
Other	0	No change	0	

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Market-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

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

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	13,774	374,751	388,525
Consumption of purchased or acquired electricity		39,082	26,318	65,400
Consumption of self-generated non-fuel renewable energy		630		630
Total energy consumption		53,486	401,069	454,556

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
--	---

Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	630	630	630	630
Heat	0	0	0	0
Steam	0	0	0	0
Cooling	0	0	0	0

C8.2e

(C8.2e) Provide details on the electricity, heat, steam, and/or cooling amounts that were accounted for at a zero or near-zero emission factor in the market-based Scope 2 figure reported in C6.3.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Wind

Country/area of low-carbon energy consumption

Netherlands

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

17,035

Country/area of origin (generation) of the low-carbon energy or energy attribute

Netherlands

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

All electricity in the Netherlands is purchased from the supplier 'Eneco', with energy attribute certificate for 100% Dutch wind power.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Mix of green (low-carbon) electricity such as wind and solar, all supported by energy attribute certificates.

Country/area of low-carbon energy consumption

United Kingdom of Great Britain and Northern Ireland

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

9,972

Country/area of origin (generation) of the low-carbon energy or energy attribute

United Kingdom of Great Britain and Northern Ireland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

In the United Kingdom, the green electricity purchased varies from region to region and sometimes even from project to project. Therefore, the green electricity purchased from multiple suppliers are combined in this row. Different types of green (low-carbon) electricity are provided, all supported by energy attribute certificates.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Mix of green (low-carbon) electricity such as wind and solar, all supported by energy attribute certificates.

Country/area of low-carbon energy consumption

Belgium

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

5,464

Country/area of origin (generation) of the low-carbon energy or energy attribute

Belgium

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

In Belgium, the green electricity purchased varies from region to region and sometimes even from project to project. Therefore, the green electricity purchased from multiple suppliers are combined in this row. Different types of green (low-carbon) electricity are provided, all supported by energy attribute certificates.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Mix of green (low-carbon) electricity such as wind and solar, all supported by energy attribute certificates.

Country/area of low-carbon energy consumption

Ireland

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

3,809

Country/area of origin (generation) of the low-carbon energy or energy attribute

Ireland

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

In Ireland, the green electricity purchased varies from region to region and sometimes even from project to project. Therefore, the green electricity purchased from multiple suppliers are combined in this row. Different types of green (low-carbon) electricity are provided, all supported by energy attribute certificates.

Sourcing method

Green electricity products from an energy supplier (e.g. green tariffs)

Energy carrier

Electricity

Low-carbon technology type

Renewable energy mix, please specify

Mix of green (low-carbon) electricity such as wind and solar, all supported by energy attribute certificates.

Country/area of low-carbon energy consumption

Germany

Tracking instrument used

Contract

Low-carbon energy consumed via selected sourcing method in the reporting year (MWh)

2,802

Country/area of origin (generation) of the low-carbon energy or energy attribute

Germany

Commissioning year of the energy generation facility (e.g. date of first commercial operation or repowering)

Comment

In Germany, the green electricity purchased varies from region to region and sometimes even from project to project. Therefore, the green electricity purchased from multiple suppliers are combined in this row. Different types of green (low-carbon) electricity are provided, all supported by energy attribute certificates.

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

Netherlands

Consumption of electricity (MWh)

19,356

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

19,356

Country/area

United Kingdom of Great Britain and Northern Ireland

Consumption of electricity (MWh)

20,331

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

20,331

Country/area

Belgium

Consumption of electricity (MWh)

6,489

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

6,489

Country/area

Ireland

Consumption of electricity (MWh)

3,860

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

3,860

Country/area

Germany

Consumption of electricity (MWh)

14,956

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

14,956

Country/area

Other, please specify

Small portion of electricity was consumed by BAM International, in the countries of Canada, Australia, Antarctica and United Arab Emirates and Indonesia

Consumption of electricity (MWh)

408

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

408

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Waste

Metric value

11.6

Metric numerator

tonnes

Metric denominator (intensity metric only)

unit of revenue (Meuro)

% change from previous year

21

Direction of change

Decreased

Please explain

Construction and office waste intensity. Target is 50% reduction in 2030 vs. 2015.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	

C-CN9.6a/C-RE9.6a

(C-CN9.6a/C-RE9.6a) Provide details of your organization's investments in low-carbon R&D for real estate and construction activities over the last three years.

Technology area

New building materials

Stage of development in the reporting year

Large scale commercial deployment

Average % of total R&D investment over the last 3 years

≤20%

R&D investment figure in the reporting year (optional)

Comment

Aggregated R&D in new building materials, such as low energy asphalt mixtures, timber products and low carbon concrete mixtures.

Technology area

Building energy management systems

Stage of development in the reporting year

Small scale commercial deployment

Average % of total R&D investment over the last 3 years

≤20%

R&D investment figure in the reporting year (optional)

Comment

Aggregated R&D in energy management systems such as smart systems.

Technology area

Resilient buildings

Stage of development in the reporting year

Pilot demonstration

Average % of total R&D investment over the last 3 years

≤20%

R&D investment figure in the reporting year (optional)

Comment

Aggregated R&D in climate adaptive measures in the built environment

C-CN9.10/C-RE9.10

(C-CN9.10/C-RE9.10) Did your organization complete new construction or major renovations projects designed as net zero carbon in the last three years?

Yes

C-CN9.10a/C-RE9.10a

(C-CN9.10a/C-RE9.10a) Provide details of new construction or major renovations projects completed in the last 3 years that were designed as net zero carbon.

Property sector

Residential

Definition(s) of net zero carbon applied

National/local green building council standard, please specify

Specification: NOM Keur, a Dutch standard for zero energy dwellings

% of net zero carbon buildings in the total number of buildings completed in the last 3 years

1.1

Have any of the buildings been certified as net zero carbon?

Yes

% of buildings certified as net zero carbon in the total number of buildings completed in the last 3 years

1.1

Certification scheme(s)

Other, please specify

NOM keur (<https://nomkeur.nl/eisennomkeur/>), a Dutch standard for zero energy dwellings.

Comment

Over the past 3 years, BAM's Dutch Construction and Property business line constructed 1216 certified zero energy dwellings.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 bam-2021.pdf

Page/ section reference

Third party assurance statement: pages 183-193 of the annual report 2021 (specifically, p.184 mentions that 'p. 40-45 Environmental Performance' is included assurance engagement)

Carbon emissions disclosed: pages 40-42

Relevant standard

Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 bam-2021.pdf

Page/ section reference

Third party assurance statement: pages 183-193 of the annual report 2021 (specifically, p.184 mentions that 'p. 40-45 Environmental Performance' is included assurance engagement)

Carbon emissions disclosed: pages 40-42

Relevant standard

Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Business travel

Scope 3: Employee commuting

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

 bam-2021.pdf

Page/section reference

Third party assurance statement: pages 183-193 of the annual report 2021 (specifically, p.184 mentions that 'p. 40-45 Environmental Performance' is included assurance engagement)

Carbon emissions disclosed: pages 40-42

Relevant standard

Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Progress against emissions reduction target	Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants	All sustainability information disclosed in our integrated report, including de modules selected, are verified by our accountant, as stated in assurance statement of BAM's

			auditor in chapter 8.1 (pages 183-193) in BAM's Annual Report.  1
C6. Emissions data	Year on year change in emissions (Scope 1 and 2)	Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants	All sustainability information disclosed in our integrated report, including de modules selected, are verified by our accountant, as stated in assurance statement of BAM's auditor in chapter 8.1 (pages 183-193) in BAM's Annual Report.  1
C6. Emissions data	Year on year emissions intensity figure	Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants	All sustainability information disclosed in our integrated report, including de modules selected, are verified by our accountant, as stated in assurance statement of BAM's auditor in chapter 8.1 (pages 183-193) in BAM's Annual Report.  1
C4. Targets and performance	Emissions reduction activities	Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants	All sustainability information disclosed in our integrated report, including de modules selected, are verified by our accountant, as stated in assurance statement of BAM's auditor in chapter 8.1 (pages 183-193) in BAM's Annual Report.  1
C8. Energy	Energy consumption	Standard 3810N Assurance engagements relating to sustainability reports of the Royal Netherlands Institute of Registered Accountants	All sustainability information disclosed in our integrated report, including de modules selected, are verified by our accountant, as stated in assurance statement of BAM's auditor in chapter 8.1 (pages 183-193) in BAM's Annual Report.  1

 1bam-2021.pdf

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?

No

C11.3

(C11.3) Does your organization use an internal price on carbon?

Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Drive low-carbon investment

GHG Scope

Scope 3

Application

Business unit is the corporate structure to which the price is applied to, namely the road construction unit of BAM Infra (civil engineering unit). BAM commissioned a Socio-economic impact assessment of the production of low energy and emission asphalt pavement (LE2AP). The study was performed by "True Price", and an actual social/environmental price was set on the emission of CO2.

Actual price(s) used (Currency /metric ton)

110

Variance of price(s) used

No variance was used.

Type of internal carbon price

Shadow price

Impact & implication

The True Price study provided BAM insight into the size of environmental impacts occurring in the asphalt production chain and made those impacts comparable. Energy use, material use and ecotoxicity turned out to be the largest remaining environmental externalities for BAM's innovative asphalt mixture LE2AP.

The use of a carbon price supports better decision-making and the results show that sustainable innovations, such as LE2AP, can create additional value for society. Over its life cycle, LE2AP reduces environmental costs by €3.56/ton (34% reduction) compared to conventional asphalt. BAM uses the results of this study to promote its LE2AP product and to incentivise future innovations in our asphalt production process and asphalt plants. BAM's long-term goal is to increase the market share of its sustainable asphalt.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers

Yes, our customers/clients

Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement

Information collection (understanding supplier behavior)

Details of engagement

Collect climate change and carbon information at least annually from suppliers

% of suppliers by number

12.8

% total procurement spend (direct and indirect)

35

% of supplier-related Scope 3 emissions as reported in C6.5

43

Rationale for the coverage of your engagement

As a constructor, suppliers are essential to BAM, and we therefore engage with almost all of our suppliers. Their knowledge, people and other resources account for over 75% of BAM's turnover (approx. €6 billion). BAM engages with suppliers that directly affect BAM's operational emissions, as reducing our operational emissions is a key target for BAM. These suppliers include: energy suppliers, lease car companies, waste

processors and construction equipment suppliers. These suppliers are requested to regularly provide information on the goods and services they have provided to allow BAM to better assess its direct and indirect carbon emissions. These suppliers cover ca. 4% of BAM's supplier related scope 3 emissions. Furthermore BAM is specifically targeting concrete and steel suppliers to provide carbon related information on the products they deliver to BAM at least annually, as concrete and steel suppliers account for the majority of BAM's supplier related scope 3 emissions (39%). At least 43% of BAM's supplier related scope 3 emissions are covered by BAM's information collection process.

Impact of engagement, including measures of success

BAM's target is to reduce scope 3 emissions by 50% in 2030 vs. 2019. To achieve this target, BAM needs to increase the level of insight in carbon data of key supplier materials. This will give BAM the opportunity to determine where the most effective changes can be made to reduce BAM's scope 3 carbon footprint. Success is measured by the percentage of insight in supply chain emissions, with a target to have 80% insight (threshold).

In 2021, by reaching out to its concrete and steel suppliers, our civil business in the UK has increased the coverage of embodied carbon emissions to 50%. They used transactional material reports from 17 suppliers that represent ca. 70% of their total spend with all material suppliers for this assessment. BAM is actively looking to improve these figures by receiving reports from other suppliers and increasing the detail in categorisation of smaller suppliers, to get closer to the 80% threshold.

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Collaboration & innovation

Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number

42.5

% of customer - related Scope 3 emissions as reported in C6.5

40.2

Please explain the rationale for selecting this group of customers and scope of engagement

BAM recognizes that real business benefits can only be achieved by involving all of its stakeholders. BAM continuously engages with all (potential) customers in all home

countries during the tender phase. In 2021 of all tenders BAM participated in and where BAM was in control of design 42,5% included sustainability component in their documentation and/or selection criteria. The scope of our engagement during the tender phase typically includes discussions with the client to make projects more sustainable (both construction phase and the final product). BAM is doing this by pro-actively hosting dialogue-sessions and joining sector-wide market consultations. Across all projects, BAM runs campaigns and focussed dialogue sessions with customers to encourage innovation with the aim to reduce climate change impact in our direct operations. Typical topics discussed during this engagement are CO2 reduction measures and the carbon footprint of supplied goods. Additionally, BAM also performs Life Cycle Assessment in consultation with these customers to calculate environmental footprint and optimise CO2 reductions in construction and operation phase.

Impact of engagement, including measures of success

The measure of success for BAM is the reduction in embodied carbon. Typically, any reduction larger than 10% (threshold) compared to the initial design is considered successful. An example of positive outcome achieved is the significant reduction of CO2 emissions in both construction phase and operation phase during the tender phase of the BAM Infra project 'Vechtdalverbinding'. The client was the Dutch province of Overijssel. During the tender various environmental life-cycle assessments (LCAs) with specific focus on material savings were conducted. Positive outcomes achieved are innovative design optimizations related to the three key materials in the project (asphalt, concrete and reinforcement steel). According to the measure of success chosen, BAM was able to reduce embodied carbon from material (re)use with 37 per cent compared to the clients design. This is mainly achieved by design optimisations in the tender phase and making use of materials ready on site: In this project currently under construction, BAM's design uses 45 per cent less concrete, 24 per cent less steel and optimised asphalt mixtures (low temperature). In 2020, realisation of the Vechtdalverbinding project started and this will be finalized in 2023. Monitoring the effect of the measures BAM offered in the tender is a key-aspect of the engagement with the client during the construction phase – ensuring a solid validation of the offered CO2 reduction savings.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Besides suppliers and customers, BAM engages with other key-stakeholder groups as part of our value chain engagement. BAM defined the following stakeholder groups with whom we choose to engage frequently: providers of financial capital, employees, society and regulators (NGOs (local) governments and knowledge institutes). These groups in the value chain were chosen because these stakeholders significantly influence or are influenced by the economic, environmental and social performance of BAM. The group has identified and prioritizes its engagement with these stakeholders based on the risks and opportunities for its business performance, strategy execution and BAM's strategic objectives. BAM's primary methods of

engagement to understand their priorities and concerns are through benchmarking, sector meetings, client surveys and direct contacts.

An example of a positive outcome of climate-related engagement in the value chain is BAM's participation in the green Deal Covenant. In 2021, BAM signed together with over 80 organizations a deal to ensure that at least 20% of all new construction projects are carried out with wood or biobased materials from 2025 onwards. The construction sector uses 40% to 50% of the earth's raw materials and is responsible for a similar share of CO2 emissions. The impact of construction on the environment is substantial and is, for example, many times greater than that of aviation. As a frontrunner in addressing climate change, BAM is already fully engaged in timber construction together with housing associations, developers and investors. The Green Deal matches BAM's ambition to work towards a more sustainable construction sector."

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

Yes, suppliers have to meet climate-related requirements, but they are not included in our supplier contracts

C12.2a

(C12.2a) Provide details of the climate-related requirements that suppliers have to meet as part of your organization's purchasing process and the compliance mechanisms in place.

Climate-related requirement

Setting a science-based emissions reduction target

Description of this climate related requirement

Science-based targets show organizations how much and how quickly they need to reduce their greenhouse gas (GHG) emissions to prevent the worst effects of climate change.

We are looking to work with companies that are equally engaged with the climate as we are. Our goal is to increase the engagement in the coming years by encouraging our top-100 suppliers to commit to a target.

% suppliers by procurement spend that have to comply with this climate-related requirement

10

% suppliers by procurement spend in compliance with this climate-related requirement

2

Mechanisms for monitoring compliance with this climate-related requirement

Off-site third-party verification

Response to supplier non-compliance with this climate-related requirement

Retain and engage

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage directly with policy makers

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

No, but we plan to have one in the next two years

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

BAM updated its Code of Conduct in 2019 and Sustainability is included as integral topic in the Code. A training on the Code of Conduct is mandatory for all new employees and after the 2019 update all existing employees also had to renew their Code of Conduct training. By the end of 2021, more than 93% of BAMs employees successfully finished the Code of Conduct training. BAM has also internally published a Sustainability policy, where BAM's strategy, ambitions and objectives are outlined. This policy is available for all employees and provides guidelines of the position of BAM on different sustainability topics, including climate change strategy. BAM's sustainability policy, strategy and agenda are developed by BAM's Corporate strategy department (the sustainability department is in fact part of the strategy department) and the Executive Board. Climate change is an explicit part of the Group's sustainability strategy. Within the Executive Board an ambassador is appointed for BAM's sustainability (including climate change) strategy, which is communicated throughout the company and to all senior staff members. These senior staff members are involved with policy engagement and match their activities to the overall collective strategy, including the sustainability strategy/policy. BAM's Sustainability Department is involved in developing and communicating the strategy and agenda and aligning stakeholder engagement initiatives to the overall collective strategy. This is done through quarterly meetings with the Executive Board. During these meetings, topics typically discussed are BAM's performance on sustainability targets (CO2 emission and waste reduction) and market/policy developments. As a global organization, BAM sits on various internal and

external committees to influence policies. All commitments and involvement are discussed and agreed in cooperation with the Sustainability Department and the broader 'Community' members (across all Operating Companies). Where relevant, senior management also endorse or champion BAM's involvement. All involvement concerning influencing policy is aligned and coordinated with BAM's strategy (including climate change action) and carefully managed through BAM's Communication department where necessary.

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate

Adaptation and/or resilience to climate change

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Advancing Net Zero Programme

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United Kingdom of Great Britain and Northern Ireland

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

Our Head of Sustainability at BAM Construct UK sits on the steering committee for the Advancing Net Zero Programme, co-sponsored by BAM. The aim of this is to agree the definition of zero carbon for the built environment, to provide a framework and to provide industry and government mechanisms to transition new and existing buildings to become net zero carbon by 2050, in line with the ambitions of the Paris Climate Agreement.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Other, please specify
Sustainable Procurement and education

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Carbon Special Interest Group at the SCSS.

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United Kingdom of Great Britain and Northern Ireland

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

BAM Nuttall's Carbon reduction Lead also sits on the Carbon Special Interest Group at the SCSS. The aim of this group is to provide a standard and consistent way of measuring and reporting on scope 1 and scope 2 carbon emissions in line with government efforts to achieve its 2050 Net Zero commitments under the Paris Climate Agreement.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Focus of policy, law, or regulation that may impact the climate

Mandatory climate-related reporting

Specify the policy, law, or regulation on which your organization is engaging with policy makers

Royal Institute of Chartered Surveyors (RICS)

Policy, law, or regulation geographic coverage

National

Country/region the policy, law, or regulation applies to

United Kingdom of Great Britain and Northern Ireland

Your organization's position on the policy, law, or regulation

Support with no exceptions

Description of engagement with policy makers

BAM is collaborating with the Royal Institute of Chartered Surveyors (RICS) concerning the development of a robust and standardized method to calculate Scope 3 carbon emissions. The project is government backed and links directly to policy makers who are expected to mandate its use in our sector in the future. BAM's role in this collaboration is to provide real-world data and beta test the solution.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify
Bouwend Nederland

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We have already influenced them to change their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

Regarding climate change, Bouwend Nederland's lobby focusses on the following: to reduce energy consumption of existing buildings, to create energy-efficient new buildings, to enhance sustainable procurement, to enhance sustainable material use, to create sustainable tools and certification, to measure environmental impact. These targets are in line with Dutch conventants and Green Deals that Bouwend Nederland agreed on. The position from Bouwend Nederland on climate change is that the construction industry in NL needs to focus more on energy-reduction initiatives.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

570,798

Describe the aim of your organization's funding

One of Bouwend Nederland's core tasks is advocacy. In their contacts with national, provincial, regional and local authorities, they try to create preconditions with and for construction and infrastructure companies in such a way that they can perform optimally within them. So the aim of our funding is to optimize the preconditions in the market so BAM can perform well.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify
NABU

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We are not attempting to influence their position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

BAM is a member of NABU (Netherlands Association of International Contractors) and is leading the new CSR committee. NABU is an open and legally independent association which represents the collective interests of Dutch contractors operating abroad. Its members are engaged in every aspect of building, civil engineering, (maritime) infrastructure and dredging. NABU focuses on establishing favourable conditions and promoting the construction industry's image. In doing so, NABU engages in regular consultation with the authorities and closely related institutions, both on a national and an international level, as well as with other trade organisations.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

44,250

Describe the aim of your organization's funding

The aim of BAM is to help the preservation of habitats and biodiversity, the promotion of sustainability in agriculture, forest management and water supply and distribution, as well as to enhance the significance of nature conservation in our society.

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) 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

In mainstream reports

Status

Complete

Attach the document

 bam-2021.pdf

Page/Section reference

Governance: chapter 5 in Integrated Report 2021 (pages 54-65)

Strategy: chapter 2 in Integrated Report 2021 (pages 8-17).

Emissions figures and Emission targets: chapter 3.3 in Integrated Report 2021 (pages 40-45).

Content elements

Governance

Strategy

Emissions figures

Emission targets

Comment

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues
Row 1	No, but we plan to have both within the next two years

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity
Row 1	No, but we plan to do so within the next 2 years

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?
Row 1	No, we are not taking any actions to progress our biodiversity-related commitments, but we plan to within the next two years

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	No, we do not use indicators, but plan to within the next two years	State and benefit indicators Pressure indicators Response indicators

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
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In mainstream financial reports	Biodiversity strategy	see page 44 📎 1
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📎 1bam-2021.pdf

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer (CEO)	Chief Executive Officer (CEO)

SC. Supply chain module

SC0.0

(SC0.0) If you would like to do so, please provide a separate introduction to this module.

BAM values SSE and NHS as customers and are pleased to fill out this Supply Chain Module on their request.

BAM Construct UK provides design and construction services to the NHS for new and refurbishment construction projects. The number of projects we operate for NHS varies from year to year. We track carbon emissions across all our projects, including all health (and NHS) projects, including our subcontractors use of fuel on our sites. Transport impacts are measured separately but can be attributed to each specific project. It should be noted that for the majority of our NHW projects, energy for use on a construction or refurbishment site is supplied by our client i.e. local health trust. This is however measured regardless and included in emissions data.

BAM Construct UK has a long-standing commitment to combat climate change and reduce the business's direct and indirect carbon emissions. We have been measuring, managing and reducing carbon emissions from our operations since 2008. Our 2021 emissions were 7,715 tCO₂e, this is a 5% increase compared with 2020. Turnover increased more significantly

compared to 2020, so our normalised emissions were 8.4 tCO₂e/£m revenue (2020: 9.2). This is a 50% reduction in carbon emissions intensity compared to our 2015 baseline.

Our ultimate goal is to have a net positive impact on climate resources and people by 2050, by working with our clients and supply chain to reduce their carbon emissions, protect and preserve natural resources and creating value for people we come into contact with.

BAM were one of the first contractors to have an approved science-based target (set at Royal BAM Group level) to reduce our global emissions by 50% by 2030. At BAM Construct UK, we have made a further commitment to become net zero carbon by no later than 2026. In 2021 we were awarded one of the first Platinum awards by CEMARS, the international carbon reduction standard, having reduced our emissions consistently for over 10 years, taking more than 20,000 tCO₂e out of our business. We are one of the first contractors to sign the world green building council net zero carbon buildings commitment, meaning we will only occupy and develop net zero carbon buildings by 2030. We are also a founding partner of the UK Green Building Council (UKGBC) Net Zero Carbon Buildings Program, which is now being adopted by a wide range of private and public sector clients, including the NHS.

SC0.1

(SC0.1) What is your company's annual revenue for the stated reporting period?

	Annual Revenue
Row 1	7,315,000

SC1.1

(SC1.1) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.

Requesting member

NHS England and NHS Improvement

Scope of emissions

Scope 1

Allocation level

Facility

Allocation level detail

Emissions are from each NHS project being delivered (onsite) during 2021 calendar year. Data collected at project level and aggregated.

Emissions in metric tonnes of CO₂e

265

Uncertainty (±%)

20

Major sources of emissions

Emissions include all electricity used on site (BAM procured and client supplied), Gas Oil used by BAM and by subcontractors on site, BAM staff miles driven to and from site (cars).

Verified

Yes

Allocation method

Allocation not necessary due to type of primary data available

Market value or quantity of goods/services supplied to the requesting member

270,000,000

Unit for market value or quantity of goods/services supplied

Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

GHG sources represent the main direct and indirect emissions associated with the construction site operations.

Requesting member

NHS England and NHS Improvement

Scope of emissions

Scope 2

Allocation level

Facility

Allocation level detail

Emissions are from each NHS project being delivered (onsite) during 2020 calendar year. Data collected at project level and aggregated.

Emissions in metric tonnes of CO₂e

213

Uncertainty (±%)

20

Major sources of emissions

Emissions include all electricity used on site (BAM procured and client supplied), Gas Oil used by BAM and by subcontractors on site, BAM staff miles driven to and from site (cars)

Verified

Yes

Allocation method

Allocation not necessary due to type of primary data available

Market value or quantity of goods/services supplied to the requesting member

270,000,000

Unit for market value or quantity of goods/services supplied

Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

GHG sources represent the main direct and indirect emissions associated with the construction site operations.

Requesting member

Scope of emissions

Scope 3

Allocation level

Facility

Allocation level detail

Emissions are from each NHS project being delivered (onsite) during 2020 calendar year. Data collected at project level and aggregated. Scope 3 emissions only includes fuel from subcontractor

Emissions in metric tonnes of CO₂e

186

Uncertainty (±%)

20

Major sources of emissions

Emissions include all electricity used on site (BAM procured and client supplied), Gas Oil used by BAM and by subcontractors on site, BAM staff miles driven to and from site (cars)

Verified

Yes

Allocation method

Allocation not necessary due to type of primary data available

Market value or quantity of goods/services supplied to the requesting member

270,000,000

Unit for market value or quantity of goods/services supplied

Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

GHG sources represent the main direct and indirect emissions associated with the construction site operations.

Requesting member

SSE

Scope of emissions

Scope 1

Allocation level

Business unit (subsidiary company)

Allocation level detail

BAM Nuttall

Emissions in metric tonnes of CO₂e

3,875

Uncertainty (±%)

0

Major sources of emissions

Our fuel use and business travel on SSE projects were:

Liquid fuel consumption = 1,546,363L

Business travel = 298,907 km

Verified

Yes

Allocation method

Allocation not necessary due to type of primary data available

Market value or quantity of goods/services supplied to the requesting member

65,500,000

Unit for market value or quantity of goods/services supplied

Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

In order to calculate energy consumption and CO2 footprint, group companies are required to report consumption of fuel, electricity, etc. When calculating energy consumption [GJ] or carbon footprint [tonnes CO2], activity data is multiplied by a default or custom conversion factor. Operating companies are required to collect activity data. Activity data are defined as the amount of consumed fuels for execution of its operations, such as the combusted litres of diesel or used KWh. Data is sourced from the supplier via transaction reports.

Requesting member

SSE

Scope of emissions

Scope 2

Allocation level

Business unit (subsidiary company)

Allocation level detail

BAM Nuttall

Emissions in metric tonnes of CO2e

1

Uncertainty ($\pm\%$)

10

Major sources of emissions

Electricity consumption: 2,652kWh

Verified

Yes

Allocation method

Allocation not necessary due to type of primary data available

Market value or quantity of goods/services supplied to the requesting member

65,500,000

Unit for market value or quantity of goods/services supplied

Currency

Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

In order to calculate energy consumption and CO2 footprint, group companies are required to report consumption of fuel, electricity, etc. When calculating energy consumption [GJ] or carbon footprint [tonnes CO2], activity data is multiplied by a default or custom conversion factor. Operating companies are required to collect activity

data. Activity data are defined as the amount of consumed fuels for execution of its operations, such as the combusted litres of diesel or used KWh. Data is sourced from the supplier via transaction reports

SC1.2

(SC1.2) Where published information has been used in completing SC1.1, please provide a reference(s).

BAM Nuttall and BAM Construct collaborate closely when reporting GHG emissions, with joint reporting assured through Carbon Reduce (previously CEMARS) (<https://www.toitu.co.nz/our-members/members/bam-group>).

As individual organisations we publish our annual GHG emissions but not specifically related to NHS projects.

You can find details of our carbon emissions in our Carbon Reduction Plans for PPN06/21
 BAM Construct UK Ltd: <https://www.bam.co.uk/docs/default-source/sustainability-reports/bam-carbon-reduction-plan-2021.pdf>

BAM Nuttall Ltd: [insert Nuttall Plan Weblink]

The results are also summarised in our annual reports

BAM Construct UK Ltd: <https://www.bam.co.uk/media-centre/resources>

BAM Nuttall Ltd: [BAM Construct UK and BAM Nuttall file 2021 annual accounts](#)

SC1.3

(SC1.3) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?

Allocation challenges	Please explain what would help you overcome these challenges
Customer base is too large and diverse to accurately track emissions to the customer level	<p>BAM is mature in their ability to allocate their scope 1 and 2 emissions to different customers, as energy use is being monitored at project level. Our use of (construction) materials is in our scope 3, and BAM's currently working on getting more insight in scope 3 emissions. For the construction sector we have defined purchased goods & services and use of sold products to be the main hotspots. Our challenge is to develop an efficient and reliable methodology to capture emissions related to the use of construction materials. We have good levels of information for bulk materials purchased, like steel and concrete from our suppliers, however our insight for Scope 3 impacts across other materials is limited.</p> <p>BAM will continue to increase the amount of Scope 3 materials information at project level for specific clients (so that they can calculate upstream emissions themselves). It is intended that a full scope 3 emissions report will be provided in the coming years to contain material use, transport, waste and business travel.</p>

SC1.4

(SC1.4) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Yes

SC1.4a

(SC1.4a) Describe how you plan to develop your capabilities.

As described, we can already allocate specific emissions to NHS and future changes would only relate to adding further emissions sources i.e. embodied carbon of projects as this is measured in line with NHS net zero strategy and framework requirements.

BAM Nuttall has developed its scope 3 emissions reporting and it is now possible to derive a customer specific carbon footprint based on a projects use of materials and resources used. This reporting capability enables BAM to have more maturity around its outline carbon assessments which are undertaken in most tenders presently – particularly in the civil infrastructure division where most schemes are funded by governments. We continue to seek whole life carbon reductions by engaging with our customers pre-design stage so we can offer the best and lowest possible carbon solutions.

SC2.1

(SC2.1) Please propose any mutually beneficial climate-related projects you could collaborate on with specific CDP Supply Chain members.

Requesting member

NHS England and NHS Improvement

Group type of project

Other, please specify

Low carbon buildings

Type of project

Other, please specify

Low carbon buildings

Emissions targeted

Other, please specify

All building related emissions.

Estimated timeframe for carbon reductions to be realized

Other, please specify

Dependant on construction and refurbishment projects we are selected to bid and deliver.

Estimated lifetime CO2e savings

0

Estimated payback

Other, please specify

Dependant on specific building projects being delivered.

Details of proposal

We are on track to reduce our organisational emissions to zero. For NHS projects, we will already use low carbon fuels and 100% renewable electricity. We see opportunities to work with NHS to minimise and reduce energy consumption of the existing estate and energy and carbon emissions from new buildings being procured. We can work with NHS to assess energy saving opportunities (e.g. via our BAM Energy esco services) and to take a design for performance approach for new projects. We can also assess and minimise embodied carbon (through performing LCA) of projects, utilising more efficient designs with lower carbon materials.

Requesting member

SSE

Group type of project

Change to supplier operations

Type of project

Implementation of energy reduction projects

Emissions targeted

Actions to reduce customers' operational emissions (customer scope 1 & 2)

Estimated timeframe for carbon reductions to be realized

1-3 years

Estimated lifetime CO2e savings

20

Estimated payback

0-1 year

Details of proposal

Following the Energy Study carried out in 2017, the awareness campaign was commenced and is estimated to have saved 10% of the fuel consumption at Melgarve. No other initiatives were acted on however learnings were shared across SSE schemes.

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?

No

SC4.1

(SC4.1) Are you providing product level data for your organization's goods or services?

No, I am not providing data

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

The European Climate Pact Submission

Please indicate your consent for CDP to showcase your disclosed environmental actions on the European Climate Pact website as pledges to the Pact.

Yes, we wish to pledge to the European Climate Pact through our CDP disclosure

Please confirm below

I have read and accept the applicable Terms