

W0. Introduction

W0.1

(W0.1) Give a general description of and introduction to your organization.

At BAE Systems plc (“BAE Systems” or “the Group”), our advanced defence technology protects people and national security, and keeps critical information and infrastructure secure. We search for new ways to provide our customers with a competitive edge across the air, maritime, land and cyber domains. We employ a skilled workforce of 90,500 people in more than 40 countries and work closely with local partners to support economic development by transferring knowledge, skills, and technology. We are the largest defence contractor in both the UK and Australia, and a top ten defence prime contractor in the US. In 2021 BAE Systems reported annual revenues of £19.5 bn across its five reporting segments Electronic Systems, Platforms & Services (US), Air, Maritime and Cyber & Intelligence. In 2021, our total water withdrawal (Mains and Abstracted) was 16,456,781 cubic meters and 951,847 cubic meters was recycled as documented in our 2021 Annual Report page 45. However, with the exception of this high-level data on water withdrawal, we currently collect limited data on water discharges and consumption. For 2021, after excluding our US sites within our business operations, we were able to collect specific water withdrawal, discharge, and consumption data from our UK and Rest of World (ROW) sites representing 89% of global water withdrawal, this includes from five sites in the UK and five sites in the Kingdom of Saudi Arabia (Saudi Arabia). References to our organisation are references to our global footprint as a company, references to the top ten sites, are references to the ten sites in scope for this year’s response with the exclusions stated in W0.6.

The reliability of the reported information and data is subject to inherent uncertainties given the available methods for determining, calculating or estimating water related data and related calculations. It is important to understand our conclusions in this context.

W0.2

(W0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date
Reporting year	January 1 2021	December 31 2021

W0.3

(W0.3) Select the countries/areas in which you operate.

- Australia
- Bahrain
- Belgium
- Brazil
- Canada
- China
- Czechia
- Egypt
- Finland
- France
- Germany
- Greece
- India
- Indonesia
- Iraq
- Ireland
- Isle of Man
- Japan
- Kuwait
- Malaysia
- Netherlands
- Norway
- Oman
- Poland
- Qatar
- Republic of Korea
- Saudi Arabia
- Singapore
- Slovakia
- South Africa
- Spain
- Sweden
- Taiwan, China
- Thailand
- Turkey
- United Arab Emirates
- United Kingdom of Great Britain and Northern Ireland
- United States of America

W0.4

(W0.4) Select the currency used for all financial information disclosed throughout your response.

GBP

W0.5

(W0.5) Select the option that best describes the reporting boundary for companies, entities, or groups for which water impacts on your business are being reported.

Companies, entities or groups over which operational control is exercised

W0.6

(W0.6) Within this boundary, are there any geographies, facilities, water aspects, or other exclusions from your disclosure?

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
Sites within our US business operations.	We are unable to collect specific water withdrawal, discharge, and consumption data from our US sites at this time. Answers to all of the following questions do not include US data and refer to the top 10 consuming sites from the UK and ROW, which are the most material sites for water use, including five sites in the UK and five sites in Saudi Arabia. For context, in 2021, our water withdrawal (Mains and Abstracted) was 16,456,781 cubic meters and 951,847 cubic meters was recycled.
One percent of our UK and ROW water withdrawal (Mains and Abstracted).	In 2021, for our UK and ROW sites, our total water withdrawal (Mains and Abstracted) was 14,652,605 cubic meters and 922,217 cubic meters was recycled. However, with the exception of this high-level data on water withdrawal, we currently collect limited data on water discharges and consumption. For 2021, we were able to collect specific water withdrawal, discharge, and consumption data from our UK and ROW sites representing approximately 99% of water withdrawal from the UK and ROW including from five sites in the UK and five sites in Saudi Arabia. The top 10 sites are responsible for almost 100% of recycled water. The excluded 1% of our UK and ROW water withdrawal (Mains and Abstracted) is not material.
Data relating to pension scheme properties not occupied by the group and joint venture properties have not been included.	We currently do not collect any water data for pension scheme properties not occupied by the group and joint venture properties.

W0.7

(W0.7) 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	GB0002634946
Yes, a Ticker symbol	BAESY - BAE Systems plc ADRs
Yes, a Ticker symbol	BA - on London Stock Exchange
Yes, an ISIN code	US05523R1077
Yes, a CUSIP number	05523R107
Yes, a SEDOL code	0263494

W1. Current state

W1.1

(W1.1) Rate the importance (current and future) of water quality and water quantity to the success of your business.

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Vital	Our primary uses of water include withdrawals for use in direct operations such as boat build activities, demineralised water used in nuclear reactors, water for boiler houses, drinking water, surface treatment processes, industrial and production process water, and indirect operations such as residential compound support for employees and dependents. The majority of our sites considered Direct use as Vital, due to the need for high-quality water in our industrial and production processes and for employee hygiene, to reduce corrosion, increase energy efficiency, and prevent safety incidents, therefore we have selected Vital for Direct use. For the Indirect use, the majority of our sites consider it as Vital, due to high quality water needed in our value chain and residential compounds, therefore, for Indirect use we have selected Vital. Future water dependency will not differ in both direct and indirect operations, because we do not currently foresee any significant changes to our organisational boundary or the locations we operate in. We do not foresee any significant changes to our market, however, we continually review changes in technology to reduce water consumption where possible.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Important	Our primary uses of recycled and brackish water in direct operations include seawater use for cooling plants and reactors and recycled water for fire suppressant/other grey water, effluent treatment to remove hazardous waste, and make-up water for production. Our primary uses of Indirect recycled and brackish water is use in sewage treatment plants. For both Direct and Indirect use most of our sites considered it to be Vital or Neutral/Not important due to its use in cooling plants/reactors, boiler make-up, fire suppressant or its minimally used or not at all, therefore we have selected Important for both Direct use and Indirect use. Future water dependency will not differ in both direct and indirect operations, because we do not currently foresee any significant changes to our organisational boundary or the locations we operate in. We do not foresee any significant changes to our market, however, we continually review changes in technology to reduce water consumption where possible.

W1.2

(W1.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	76-99	Most of our top 10 sites from the UK and ROW, monitor water withdrawals, except for rain harvesting, on an ongoing basis using site level water meters, seawater pump running hours, or from invoices/billing. The percentages stated relate to the top 10 sites only.
Water withdrawals – volumes by source	76-99	Most of our top 10 sites from the UK and ROW, monitor water withdrawals total volumes by source, except for rain harvesting, on an ongoing basis using site level water meters, seawater pump running hours, from invoices/billing or supplier network online portal. The percentages stated relate to the top 10 sites only.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>
Water withdrawals quality	51-75	The majority of our top 10 sites from the UK and ROW, monitor water withdrawals quality from the source and some monitor it after treatment. Monitoring is completed on an ongoing basis using supplier portal water analysis. Our management systems include monitoring and measurement requirements relevant to the site's operations. The percentages stated relate to the top 10 sites only.
Water discharges – total volumes	51-75	The majority of our top 10 sites from the UK and ROW, monitor water discharges total volumes for billing or regulatory purposes on an ongoing basis using site level water meters or from invoices/billing. Some of the monitoring across the sites includes trade effluents monitoring, discharges from water abstraction for cooling, discharges from all residential compound locations and offices under company control. This is in line with the requirements of site environmental management systems. The percentages stated relate to the top 10 sites only.
Water discharges – volumes by destination	51-75	The majority of our top 10 sites from the UK and ROW, monitor water discharges volumes by destination for billing or regulatory purposes on an ongoing basis using site level water meters or from invoices/billing. The water discharges go to different destinations such as waste treatment works and package sewage treatment plants. This is in line with site environmental management systems, which require sites to identify legal requirements associated with monitoring water discharge and implement them through monitoring and measurements plans. The percentages stated relate to the top 10 sites only.
Water discharges – volumes by treatment method	26-50	Some of our top 10 sites from the UK and ROW, monitor water discharges volumes by treatment method for billing or regulatory purposes on an ongoing basis using site level water meters or from invoices/billing. This is in line with site environmental management systems, which require sites to identify legal requirements associated with monitoring water discharge and implement them through monitoring and measurements plans. The percentages stated relate to the top 10 sites only.
Water discharge quality – by standard effluent parameters	76-99	The majority of our top 10 sites from the UK and ROW, monitor this for billing or regulatory purposes on an ongoing basis using sampling or from invoices/billing. This is in line with site environmental management systems, which require sites to identify legal requirements associated with monitoring water discharge and implement them through monitoring and measurements plans. For example, final effluent which leaves one of the sites into local sewer is sampled by a composite sample which is taken over a 24-hour period. The sewage undertaker tests a monthly composite and a monthly spot sample. These are analysed for a variety of parameters to assess compliance with discharge limits. In addition, all discharges from onsite water treatment facilities are sampled weekly by onsite laboratories. The site with the largest consumption of water has the majority of its effluent water sampled. The percentages stated relate to the top 10 sites only.
Water discharge quality – temperature	26-50	Some of our top 10 sites from the UK and ROW, monitor water discharge quality – temperature for regulatory purposes on an ongoing basis using meters. This is in line with site environmental management systems, which require sites to identify legal requirements associated with monitoring water discharge and implement them through monitoring and measurements plans. For example, in one case seawater cooling and trade effluents from heated sources are monitored for temperature as per that site's standard operating procedure. The percentages stated relate to the top 10 sites only.
Water consumption – total volume	76-99	Most of our top 10 sites from the UK and ROW, monitor Water consumption – total volume on an ongoing basis by calculating withdrawals minus discharges. However, volumes of total effluent discharged is not always known due to rainwater ingress on the sites or from losses through evaporation and so the exact total consumption is not calculable. The percentages stated relate to the top 10 sites only.
Water recycled/reused	76-99	Most of our top 10 sites from the UK and ROW, monitor water recycled/reused on an ongoing basis by estimating use in processes. This is in line with site environmental management systems, which require sites to identify legal requirements associated with monitoring recycled water and implement them through monitoring and measurements plans. The percentages stated relate to the top 10 sites only.
The provision of fully-functioning, safely managed WASH services to all workers	100%	All of our top 10 sites from the UK and ROW, monitor services for workers and WASH services which are important for the continuation of operations on an ongoing basis. Welfare facilities are audited by the site Facilities and Safety Teams. The percentages stated relate to the top 10 sites only.

W1.2b

(W1.2b) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, and how do these volumes compare to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	13713	Much higher	The consumption is much higher than last year which is attributed to increased operations, such as an increase in the boat build programme and SMITE testing / commissioning activities. Future water withdrawals will fluctuate alongside production levels.
Total discharges	12423	Much higher	Discharges are much higher than 2020 which is attributed to increased operations, such as an increase in the boat build programme and SMITE testing / commissioning activities or from reject water. Future total discharge volumes will fluctuate alongside production levels.
Total consumption	1290	Lower	The consumption total is a calculation based on water withdrawals minus the discharge. Some of our sites do not monitor the quantity of discharge from their foul sewerage system (which may also fluctuate due to rain water ingress) and so the total water balance should be taken as an estimate. Future total consumption volumes will fluctuate alongside production levels, although businesses have local level initiatives, like leak detection and pipe repairs to reduce consumption. We will continue to monitor consumption levels across our sites.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	1-10	This is our first year of measurement	Other, please specify (Swiss Re CatNet & Stargate)	At BAE Systems, we assess areas with water stress as those with low water security and availability with a local context. The majority of our sites that withdraw a significant volume of water from areas with low water security and low availability are located in Saudi Arabia. The total volume of withdrawal from Saudi Arabia is 1515 megalitres which is less than 10% of the total volume within the reporting boundaries for company-wide withdrawals. We have introduced sensor taps, reducing water flow, adding dry landscaping to avoid the need for landscaping water and comparing consumption month on month to see a reduction in overall consumption.

W1.2h

(W1.2h) Provide total water withdrawal data by source.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	104.8	Higher	The figure reported is higher than the previous year due to higher levels of production. This is also reflective of an increase in number of personnel back to our sites after the COVID 19 restrictions were lifted.
Brackish surface water/Seawater	Relevant	11538	Much higher	The figure reported is higher than the previous year due to higher abstracted water usage from our boat building programme and an agency's work in carrying out SMITE testing and commissioning activities.
Groundwater – renewable	Not relevant	<Not Applicable>	<Not Applicable>	BAE Systems does not withdraw water from Groundwater-Renewable Sources and therefore this is not relevant.
Groundwater – non-renewable	Relevant	1031	Higher	The figure reported is higher than the previous year due an increase in employees on site and on residential compounds which will relate to a higher consumption of water.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	BAE Systems does not withdraw water from produced/entrained water and therefore this is not relevant.
Third party sources	Relevant	1039	Higher	There has been overall minimal change as compared to previous year.

W1.2i

(W1.2i) Provide total water discharge data by destination.

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Not relevant	<Not Applicable>	<Not Applicable>	BAE Systems does not discharge to fresh surface water and therefore this is not relevant.
Brackish surface water/seawater	Relevant	11538	Much higher	This is only relevant for two of our top 10 sites. There was higher discharge in 2021 due to an increase in volume of seawater required for production compared to 2020 due to three-yearly fluctuations in production/operational activities at one of our UK locations.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	BAE Systems does not discharge to fresh surface water and therefore this is not relevant.
Third-party destinations	Relevant	885	Lower	Our discharge increased from 2020 due to higher withdrawal which was due to higher production. Discharge to third party sources is partly estimated as not all of our sites monitor discharge of foul sewerage to municipal sewerage pipes.

W1.2j

(W1.2) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Relevant	55.8	Higher	1-10	55.8 is an estimate from multiple sites. We have several effluent treatment plants which undertake tertiary treatment of effluents generated from surface treatment processes. At the tertiary level this primarily focuses upon heavy metal removal, pH adjustment and flocculation treatment. Standards are set by local legislation for example in the UK, processes follow the Water Industries act.
Secondary treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	See explanatory comments in 'Other' row.
Primary treatment only	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	See explanatory comments in 'Other' row.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	We don't use this level of treatment as it is not relevant to our operations.
Discharge to a third party without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	We don't use this level of treatment as it is not relevant to our operations.
Other	Relevant but volume unknown	<Not Applicable>	<Not Applicable>	<Not Applicable>	BAE Systems use primary and secondary treatment however this isn't metred at all sites so we can't give the associated total volumes. Primary is relevant to the Saudi Arabia sites and secondary treatment is relevant to one of our top 10 UK sites. At the UK site we send water to secondary treatment on site. Volumes of treated effluent which are discharged to the local estuary are not metred. In Saudi Arabia, all sewage is captured and treated on site with aeration tanks and sludge removal. In addition, there is a dewatering plant where sludge is removed via a polymer – wastewater from the process is recycled which goes into landscaping. 100% of wastewater goes back into waste system and then percolates into the ground after full treatment.

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	1952100000	16456.78	1186198.02901904	As revenue increases we will review our ongoing programmes, including the need for additional efficiency measures. This relates to our global organisation's water withdrawals

W1.4

(W1.4) Do you engage with your value chain on water-related issues?

No, we do not engage on water with our value chain

W1.4d

(W1.4d) Why do you not engage with any stages of your value chain on water-related issues and what are your plans?

	Primary reason	Please explain
Row 1	Important but not an immediate business priority	We currently include water stewardship and risk management in supplier selection mechanism and assess our suppliers against climate related issues (which applies to 100% of suppliers) but not explicitly water issues. In 2022 we appointed a group director (Group ESG, Culture & Business Transformation Director,) for ESG issues and we recognise that going forwards, we need to review our strategic approach to water. We currently evaluate our critical suppliers for our BCM (Business Continuity Management) - this could highlight flooding risks / or other environmental risks but this is not part of engagement with the suppliers . We also use Dow Jones systems to track due diligence issues in the supply chain. The System alerts the company to events such as environmental prosecutions, which would cover water. This is conducted as part of the initial supplier approval process but is then ongoing and success has not been measured yet.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?

No

W2.2

(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

No

W3. Procedures

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?

Yes, water-related risks are assessed

W3.3a

(W3.3a) Select the options that best describe your procedures for identifying and assessing water-related risks.

Value chain stage

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed in an environmental risk assessment

Frequency of assessment

Annually

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Enterprise risk management

International methodologies and standards

Databases

Other

Tools and methods used

Environmental Impact Assessment

Life Cycle Assessment

Internal company methods

Contextual issues considered

Water regulatory frameworks

Status of ecosystems and habitats

Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered

Customers

Employees

Investors

Local communities

NGOs

Regulators

Suppliers

Water utilities at a local level

Comment

Our sites have environmental management systems in place that require environmental risk assessments to be undertaken in line with our Environment Policy. For some of the sites, ISO14001 requires each business to undertake environmental aspects assessments, identifying any significant risks. Understanding how the business may be impacted by its environmental factors is also a key component of mitigating emerging medium- and longer-term risk. Water scarcity is an example of an environmental factor that has the potential to impact our operations, for example, if a site extracts water for process use.

Value chain stage

Supply chain

Coverage

Partial

Risk assessment procedure

Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment

Every three years or more

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

International methodologies and standards

Tools and methods used

IPCC Climate Change Projections

Other, please specify (Swiss Re CatNet & Stargate), International methodologies (IPCC climate change projections)

Contextual issues considered

Other, please specify (Business Continuity Management)

Stakeholders considered

Suppliers

Comment

Critical suppliers have been reviewed against potential environmental risk using the tools above including flood risk analysis and draught analysis and to determine future water scarcity and water quality.

W3.3b

(W3.3b) Describe your organization's process for identifying, assessing, and responding to water-related risks within your direct operations and other stages of your value chain.

For identifying risk to our organisation, we use Environmental Impact Life Cycle Assessment, and internal company methods as the selected tools and methods. For Direct Operations, we use Swiss Re, CatNet and Stargate, to identify the likelihood of extreme weather events that could cause flooding, draughts etc. and also in the supply chain, to evaluate supplier locations. Water related risks are assessed as part of the broader environmental management system, with the tool providing an environmental impacts and aspect assessment to review operational impact. Assessments are reviewed between 1- and 3-years dependent on the risk level.

Our businesses use aspects and impacts assessments that conform to the methodology set out in ISO 14001:2015 – this includes using a 5 by 5 matrix to establish environmental impact ratings and to determine significant environmental impacts. Any significant risks which could impact business reputation, business continuity or cost (e.g., major remediation), water regulatory frameworks, impact on ecosystems and habitats, access to fully functioning, safely managed WASH services for employees is escalated to the site risk register and or the Business Risk Register. Once the aspects assessment is conducted, action plans are then put in place to improve, control, or monitor the aspect. A business management systems procedure is in place for the identification and assessment of environmental aspects and impacts include the identification of risks and opportunities.

Where we have locations operating under legislation which deems certain activities require a permit from a regulator in order to prevent pollution, such as the Environmental Permitting (England and Wales) Regulations 2016, the regulator places requirements on the business to complete risk assessments using their assessment tool (H1). H1 considers the risks to air, water and land dependant on the process being undertaken. H1 modelling requires the permit holder to assess any hazardous chemicals or specific substances planned to be released to water, a screening test is conducted to determine if the pollutants are a risk to the environment. H1 utilises either actual or estimated data along with the discharge volume, background concentration and sewerage treatment reduction factors and compares the result against an environmental quality standard to ascertain if the discharge poses a risk to the environment.

Initial assessment is conducted for the entire facility prior to it becoming operational, and again upon it being fully operational. A part of the environmental permitting regulations H1 modelling assessment for emissions and identification of local receptors where our operations could be detrimental was submitted for permit approval. Where permit variations are required to modify / improve or change a process updated H1 modelling assessments are required with environment agency approval needed. Annual data submissions regarding consumption are made to the environment agency.

When developing new facilities, consideration is given to ensure compliance with water supply / water fitting regulations. i.e., installation of backflow prevention, to prevent contamination of water supply. The mechanism to highlight these controls would be through design review processes. We monitor effluent discharges and local controls to ensure effluent does not have an impact upon local environments.

The board has overall responsibility for risk management which requires each business to have in place risk and opportunity management plans. Risks are captured, continuously monitored and have associated action plans developed and reviewed, the budget for mitigations and appropriate contingencies for risk are provisioned, controls implemented and this information is reported through established management control procedures.

From a direct operational perspective, through our environmental aspect and impact assessment process, consultation is encouraged with several stakeholders that include customers, employees, local communities, NGO's, regulators, suppliers, investors, water utilities at a local level when assessments are undertaken. Critical suppliers BCM (Business Continuity Management) activity is reviewed and. Dow Jones systems are used to track due diligence issues in the supply chain. This is conducted as part of the initial supplier approval process.

Environmental permitting requirements are a part of site permit and discharge consent for the regulator.

Through PARC (product assessment and reliability centre) assessments the Air Business Continuity team assesses several climate related risks such as flooding, wind speed and water supply. Responding to risk follows the BCM processes that have been identified for each site across numerous risks identified via the process above.

W4. Risks and opportunities

W4.1

(W4.1) Have you identified any inherent water-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes, only within our direct operations

W4.1a

(W4.1a) How does your organization define substantive financial or strategic impact on your business?

For the purposes of this report, we define substantive financial impact as an event which, if it occurred, would result in a loss to the company, and we define substantive strategic impact as an event which, if it occurred, will have a negative impact on the achievement of the objectives within the Group Strategic Framework and underpinning Integrated Business Plans (IBP). Our definition of substantive financial impact applies to our direct operations and supply chain. Substantive financial or strategic impact on our business is defined as an event, that may occur, that will have a negative impact on the achievement of the objectives within the Group Strategic Framework and underpinning Integrated Business Plans (IBP). These can be categorized as either Financial or Non-Financial Risks. Financial risks expose the Group to potential costs, which are quantifiable on the basis that their probability and impact can be understood adequately and related to the financial statements. Non-financial risks cannot be assessed readily in financial terms and, therefore, cannot be reflected reliably within the financial statements. Our overall risk management process is applicable to both financial and non- financial risks and is tailored to accommodate the differences in the management of these risks. Environmental risks, including water may feature as financial or non-financial risks depending on the extent to which their impacts can be quantified, and how they have been classified. The definition of Substantive impact is determined locally for each business and is typically based upon a financial impact level and a probability of occurrence. For example, it could be a £1M impact at a 20% probability of occurrence.

W4.1b

(W4.1b) What is the total number of facilities exposed to water risks with the potential to have a substantive financial or strategic impact on your business, and what proportion of your company-wide facilities does this represent?

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	1	1-25	Climate-related physical risks associated with operations in relation to extreme weather events, for example flood and drought.

W4.1c

(W4.1c) By river basin, what is the number and proportion of facilities exposed to water risks that could have a substantive financial or strategic impact on your business, and what is the potential business impact associated with those facilities?

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland	Not known
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Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

Production value for the metals & mining activities associated with these facilities

<Not Applicable>

% company's annual electricity generation that could be affected by these facilities

<Not Applicable>

% company's global oil & gas production volume that could be affected by these facilities

<Not Applicable>

% company's total global revenue that could be affected

1-10

Comment

For the top ten sites in scope for our response this year, a facility in the UK is prone to risks caused by river flooding, flash flood, and storm surge. The company has a risk engineering programme to mitigate the impact of potential losses and insurance provisions to protect its operations and revenue.

W4.2

(W4.2) Provide details of identified risks in your direct operations with the potential to have a substantive financial or strategic impact on your business, and your response to those risks.

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland	Other, please specify (We are not able to disclose the location due to the nature of our business.)
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Type of risk & Primary risk driver

Acute physical	Flood (coastal, fluvial, pluvial, groundwater)
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Primary potential impact

Closure of operations

Company-specific description

A facility in the UK is prone to risks caused by river flooding, flash flood, and storm surge. In case of such an event the impact can be substantial resulting in up to the closure of the site and at the least capital investment for recovery.

Timeframe

More than 6 years

Magnitude of potential impact

Medium-high

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Figure minimum = Cannot be determined – could have several years with no losses Figure max = Not declared Partner insurers provide annual expected loss information for our portfolio. We carry out individual loss estimates on a 1 in 100 and 1 in 500-year event at critical sites. The output of these is not information that is shared publicly.

Primary response to risk

Increase capital expenditure

Description of response

Risk improvement recommendations would be identified, budgeted for and implemented.

Cost of response

350000

Explanation of cost of response

The cost of the response will depend on the nature of the risk improvement and the capital required to implement; this could be range from £0 - £350,000 as an estimate based on historic risk register improvement measures. But this estimate, which is not a committed spend can vary based on the complexity of the response and size of the site. For example, surveys are conducted at the site level and recommendations to flood defences, pumps etc., can then be costed and approved.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Evaluation in progress	Although water related risks are identified in our direct operations, we may evaluate if we are exposed to water risks in our value chain in the next 2-3 years. An evaluation of our critical supplies for flood risk, water security, and water quality has been conducted.

W4.3

(W4.3) Have you identified any water-related opportunities with the potential to have a substantive financial or strategic impact on your business?

No

W4.3b

(W4.3b) Why does your organization not consider itself to have water-related opportunities?

	Primary reason	Please explain
Row 1	Opportunities exist, but none with potential to have a substantive financial or strategic impact on business	We have not identified any water related opportunities with the potential to have substantive financial impact. All water related opportunities that have been realised would not be considered substantive to our business. Substantive financial or strategic impact on our business is defined as an opportunity that would have a positive impact on the achievement of the objectives within the Group Strategic Framework and underpinning Integrated Business Plans (IBP). The definition of Substantive impact is determined locally for each business and is typically based upon a financial impact level and a probability of occurrence. For example, it could be a £1M impact at a 20% probability of occurrence. We assess water opportunities regularly as they arise.

W5. Facility-level water accounting

W5.1

(W5.1) For each facility referenced in W4.1c, provide coordinates, water accounting data, and a comparison with the previous reporting year.

Facility reference number

Facility 1

Facility name (optional)

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland	Other, please specify (We are not able to disclose the location due to the nature of our business.)
--	--

Latitude

Longitude

Located in area with water stress

No

Primary power generation source for your electricity generation at this facility

<Not Applicable>

Oil & gas sector business division

<Not Applicable>

Total water withdrawals at this facility (megaliters/year)

80

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

80

Total water discharges at this facility (megaliters/year)

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

Discharges to groundwater

0

Discharges to third party destinations

Total water consumption at this facility (megaliters/year)

80

Comparison of total consumption with previous reporting year

About the same

Please explain

The facility is located in an area of flood risk but not water stress. Total water discharges is unknown due to addition from surface water.

W5.1a

(W5.1a) For the facilities referenced in W5.1, what proportion of water accounting data has been third party verified?

Water withdrawals – total volumes

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

BAE Systems has robust internal systems/processes for monitoring. Abstracted water is monitored with a meter against a permitted value. Domestic water is metered, and consumption is billed. Operationally, our environmental management system helps manage and minimize the water we use across our facilities and manufacturing processes.

Water withdrawals – volume by source

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

BAE Systems has robust internal systems/processes for monitoring. Abstracted water is monitored with a meter against a permitted value. Domestic water is metered, and consumption is billed. Operationally, our environmental management system helps manage and minimize the water we use across our facilities and manufacturing processes.

Water withdrawals – quality by standard water quality parameters

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

BAE Systems has robust internal systems/processes for monitoring. Abstracted water quality is monitored post treatment. Domestic water is metered, and consumption is billed. Operationally, our environmental management system helps manage and minimize the water we use across our facilities and manufacturing processes.

Water discharges – total volumes

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

BAE Systems has robust internal systems/processes for monitoring. Water discharges from the facility are well within the daily allowance. Operationally, our environmental management system helps manage and minimize the water we use across our facilities and manufacturing processes.

Water discharges – volume by destination

% verified

Not relevant

Verification standard used

<Not Applicable>

Please explain

BAE Systems has robust internal systems/processes for monitoring. There is a single destination for water discharge from the facility and is well within the daily allowance. Operationally, our environmental management system helps manage and minimise the water we use across our facilities and manufacturing processes. Discharge data is recorded locally and or where necessary for the discharge permit.

Water discharges – volume by final treatment level

% verified

Not relevant

Verification standard used

<Not Applicable>

Please explain

BAE Systems has robust internal systems/processes for monitoring. The water discharge from the facility is not treated and is well within the daily allowance permitted. Operationally, our environmental management system helps manage and minimize the water we use across our facilities and manufacturing processes.

Water discharges – quality by standard water quality parameters

% verified

Not relevant

Verification standard used

<Not Applicable>

Please explain

BAE Systems has robust internal systems/processes for monitoring. The water discharge from the facility is not treated and is well within the daily allowance permitted. Operationally, our environmental management system helps manage and minimise the water we use across our facilities and manufacturing processes.

Water consumption – total volume

% verified

Not verified

Verification standard used

<Not Applicable>

Please explain

BAE Systems has robust internal systems/processes for monitoring. Abstracted water quality is monitored post treatment. Domestic water is metered, and consumption is billed. Operationally, our environmental management system helps manage and minimize the water we use across our facilities and manufacturing processes.

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?

No

W6.2

(W6.2) Is there board level oversight of water-related issues within your organization?

Yes

W6.2a

(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Board-level committee	Environmental, Social and Governance Committee The Board oversees, through the Committee, the Company's ESG performance. We monitor the Company's performance against selected external sustainability indices and review its performance on ESG matters. Climate change is one such matter and the Committee oversees the Company's response in respect of its own impacts on the environment and its response to the potential impacts of climate change on the Company's future and current operations. The Board has the responsibility to ensure that climate-related risks and opportunities are appropriately addressed. We understand that without effective climate governance structures, it will be difficult to make informed strategic decisions, manage climate transition risks and monitor the associated metrics to achieve our climate-related goals. The Committee supports the Board in overseeing the progress of the executive in ensuring that the Company takes an integrated, strategic approach to addressing climate transition risks and opportunities. Understanding how the business may be impacted by relevant environmental factors is one key component of mitigating emerging, medium- and longer-term risk. Water scarcity is an example of an environmental factor that has the potential to impact our operations, for example, if a site extracts water for process use. Operationally, our environmental management systems help manage and minimize the water we use across our facilities and manufacturing processes, and we protect and support the water ecosystems which our facilities and communities depend on.

W6.2b

(W6.2b) Provide further details on the board's oversight of water-related issues.

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Sporadic - as important matters arise	Monitoring implementation and performance Reviewing and guiding risk management policies Reviewing and guiding corporate responsibility strategy	As part of the Environmental, Social and Governance Committee's agenda, 'environment' is a standing item at board meetings but water is not reviewed explicitly. In October 2021, the Company held an ESG event, and the directors engaged with more than 130 investors and other stakeholders. The topics discussed at the event centred largely on our environmental responsibilities and the robust governance processes we apply to our products and services – all of which is in addition to the legal and regulatory controls applied by governments. Our Board oversees, through the Environmental, Social and Governance Committee, our approach to sustainability, including climate change. The Committee ensures that appropriate climate change and environmental programmes are in place and incentives are set as required to reduce the Group's environmental impact. Day-to-day responsibility for environmental issues including climate-related issues sits with our Group ESG, Culture and Business Transformation Director. The ESG Committee is comprised of non-executive directors of the Company appointed by the Board and met three times during 2021. The ESG Committee invites the Chairman, Chief Executive and a number of other senior executives to attend its meetings to discuss and monitor progress on the ESG issues.

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues	Primary reason for no board-level competence on water-related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row 1	Not assessed	<Not Applicable>	<Not Applicable>	<Not Applicable>

W6.3

(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).

Name of the position(s) and/or committee(s)

Other, please specify (Sustainability Director Safety Health and Environment and D&I and the Group Director Conduct, Governance and Sustainability.)

Responsibility

Other, please specify (Monitoring of water consumption)

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

The organization does not have a group strategic approach to water but manages water consumption through facilities monitoring and reporting data. Environmental reports are provided quarterly, which include water consumption to the Sustainability Director Safety Health and Environment and D&I and the Group Director Conduct, Governance and Sustainability.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	No, and we do not plan to introduce them in the next two years	Our Board Environmental, Social and Governance Committee provides oversight of the Company's agenda and progress, including approving ESG-related objectives and targets which form part of executive incentives. The Committee ensures that appropriate climate change and environmental programmes are in place and incentives are set as required to reduce the Group's environmental impact. Key ESG risks have been integrated into the Company's long-term strategy. Consequently, the Committee has been considering the best approach to incorporate these within our long-term incentive plans. In our discussion on this matter, we agreed the importance of ensuring that any ESG-related performance conditions are clearly aligned with our strategy.

W6.5

(W6.5) Do you engage in activities that could either directly or indirectly influence public policy on water through any of the following?

No

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?

Yes (you may attach the report - this is optional)

bae-ar-complete-2021.pdf

W7. Business strategy

W7.1

(W7.1) Are water-related issues integrated into any aspects of your long-term strategic business plan, and if so how?

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	Changes and potential process interactions have historically, and will continue to be, considered in association with compliance/impact to permits and authorizations i.e., Abstraction licenses. Focus will be on reduction in water consumption by repairing leaks. Annual water targets are set by some business units to achieve a reduction in consumption on previous years. Since water consumption is based on product demand when production volumes increase it is difficult to reduce consumption. Operationally, our environmental management systems help manage and minimise the water we use across our facilities and manufacturing processes, and we protect and support the water ecosystems which our facilities and communities depend on. Initiatives are specific to how businesses consume water operationally and incorporate stages of manufacture, for example, flooding of dry docks. At multiple sites, leak detection and repair programmes are ongoing with further investments planned for 2022. We continue to evaluate climate-related scenarios across our global portfolio of sites to be aware of the potential for flooding and drought, to ensure we manage the risk to our people and operations.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	We support the UN Sustainable Development Goals (SDGs). The global nature of our business means that some of our programmes may influence other SDGs. The Group is subject to comprehensive environmental laws and regulations in each of the countries in which it operates that impose standards with respect to air emissions, wastewater discharges, the use, handling and storage of hazardous materials and waste, remediation of soil and groundwater contamination and the prevention of pollution. The Group may also be impacted by environmental factors, such as flooding and storms, and scarcity of water and other resources. Understanding business impacts by its environmental factors is therefore a key component of mitigating emerging, medium- and longer-term risk. Water scarcity is an example of an environmental factor that has the potential to impact our operations, for example, if a site extracts water for process use. Operationally, our environmental management systems help manage and minimize the water we use across our facilities and manufacturing processes, and we protect and support the water ecosystems which our facilities and communities depend on. Initiatives are specific to how businesses consume water operationally and incorporate stages of manufacture. At multiple sites, leak detection and repair programmes are ongoing . We continue to evaluate climate-related scenarios across our global portfolio of sites to be aware of the potential for flooding and drought.
Financial planning	Yes, water-related issues are integrated	5-10	There are Implications to increases in water costs and therefore these are considered within year-to-year budgets and a five-year rolling consumption / budget forecast is produced and issued to the Procurement utility category lead annually . There is also a five-year capital investment allocation agreed for improvement in water infrastructure at several locations and a detailed plan is being developed on an annual rolling basis. Our Air Sector business targets have been calculated against a baseline consumption, taking into account various planned investments and activities that affect energy, water and waste consumption on three main Air UK sites giving an 'expected' consumption. This is then used as the 'baseline' target in the Environment Metrics. Considering planned initiatives for the sites, and calculating their estimated savings, a 'stretch' target is then set for the Air Sector across all utilities, and this is disseminated to the site targets.

W7.2

(W7.2) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?

Row 1

Water-related CAPEX (+/- % change)

Anticipated forward trend for CAPEX (+/- % change)

Water-related OPEX (+/- % change)

Anticipated forward trend for OPEX (+/- % change)

Please explain

W7.3

(W7.3) Does your organization use scenario analysis to inform its business strategy?

	Use of scenario analysis	Comment
Row 1	Yes	To better understand how the potential long-term impacts of climate change could impact our business, in line with the TCFD recommendations, during 2021 we began the process of climate change scenario analysis. We have conducted qualitative climate change risk and opportunity hotspot mapping with representatives from across our business to obtain a better understanding of the climate issues that could impact the business in the future. We are already taking action around extreme weather events using analytical tools to apply natural catastrophe classifications to our main operational sites worldwide. We have reviewed these qualitative scenarios along with the material risks and opportunities identified. We have significant experience in managing our exposure to physical risks and our strategy to manage those risks already takes into account different climate change scenarios and data already gives a good view as to which of our assets are at most risk .

W7.3a

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Water-related Climate-related	During 2021, we further developed our understanding of the climate-related risks and opportunities with the potential to impact BAE Systems' business model and strategy. We are now progressing quantification of material risk and opportunities against identified scenarios. Further work is planned for 2022 to enable us to develop our views in relation to the resilience of our strategy. We continue to evaluate climate-related scenarios across our global portfolio of sites to be aware of the potential for flooding and drought, to ensure we manage the risk to our people and operations. We use the Swiss Re Climate Assessment Tools to look at the impact of natural catastrophes on our portfolio which then informs our risk engineering strategy and engagements with the business around responding to different natural hazards. Initial investigations have identified an increasing risk from flood at certain sites in the UK and US. During 2021 we modelled climate scenarios for 2030, 2050 and 2085. We have also begun to assess the natural hazard risks of our critical Tier 1 suppliers' sites. We further developed our understanding of the climate-related risks and opportunities with the potential to impact BAE Systems' business model and strategy as a result of the qualitative scenario modelling which has taken place. We are now starting to progress quantification of material risks and opportunities against identified climate scenarios.	Operationally, our environmental management systems help manage and minimise the water we use across our facilities and manufacturing processes, and we protect and support the water ecosystems which our facilities and communities depend on. Some businesses set initiatives and targets to reduce water consumption annually as appropriate. Initiatives are specific to how businesses consume water operationally and incorporate stages of manufacture, for example, flooding of dry docks. At multiple sites, leak detection and repair programmes are ongoing with further investments planned for 2022. We continue to evaluate climate-related scenarios across our global portfolio of sites to monitor for flooding and drought, to ensure we manage the risk to our people and operations. With funding from Innovate UK, we are also working with both Uber Boat by Thames Clippers and Cory Riverside Energy to develop a zero emissions strategy with solutions based on our next-generation electric drive system.	The Group is subject to comprehensive environmental laws and regulations in each of the countries in which it operates, including those relating to the impacts of climate change. Such laws and regulations impose standards with respect to air emissions, wastewater discharges, the use, handling and storage of hazardous materials and waste, remediation of soil and groundwater contamination and the prevention of pollution. Some of our businesses are setting targets to reduce water consumption. While the Group has addressed the impact on its business effectively to date, given the ongoing risks and uncertainties, it continues to conduct ongoing risk assessments and scenario planning in order that it can respond to potential rapid changes in circumstances. The Group will progress scenario planning to quantify climate-related risks and opportunities. The Internal Audit function has increased its level of assurance activity in the ESG sphere and plans to build on its existing capability in 2022.

W7.4

(W7.4) Does your company use an internal price on water?

Row 1

Does your company use an internal price on water?

No, and we do not anticipate doing so within the next two years

Please explain

We use goals and targets to promote reducing water in operations, so we do not use an internal price on water.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	No, and we do not plan to address this within the next two years	<Not Applicable>	Important but not an immediate business priority	We are considering recirculating treated water back into site reservoirs, lowering abstraction rates and thus lower the water impact of our products. In high water stress areas in the Middle East, it is already being done and the recycling rates range from 33.8% to 95%.

W8. Targets

W8.1

(W8.1) Describe your approach to setting and monitoring water-related targets and/or goals.

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Business level specific targets and/or goals Site/facility specific targets and/or goals Brand/product specific targets and/or goals	None are monitored at corporate level	1. Business Level specific targets and/or goals: Businesses can set initiatives and targets to reduce water consumption annually as appropriate. Initiatives are specific to how businesses consume water operationally and incorporate stages of manufacture, for example, flooding of dry docks. We continue to evaluate climate-related scenarios across our global portfolio of sites to monitor for flooding and drought, to ensure we manage the risk to our people and operations. For example, Our Air business sets annual site water consumption targets based upon predicted consumption for the year. Then a reduction target is set, based upon possible improvements scheduled - through developments, such as leak detection programmes and metering improvements. Targets are monitored monthly through metering data – this is not escalated outside of the Air business. Monthly water consumption is recorded in our corporate CR desktop tool. 2. Site/facility specific targets and/or goals: Business level targets are set annually and are then cascaded to the site level. For example, our Washington UK site's reduction of 3% was originally predicted based on 2020 consumption however re-baselined in September 2021 due to increase in production volumes which saw an increase of 4% against 2020 consumption. In addition, at multiple sites, leak detection and repair programmes are ongoing with further investments planned for 2022. 3. Brand/product specific targets or goals: Project specific goals for managing water related aspects are included in the lifecycle assessment for the product where they are applicable, in line with the businesses' Operational Framework. For example, BAE Systems Submarines, sets a target modelled consumption for the year and monitors on a monthly basis.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?
No, we do not currently verify any other water information reported in our CDP disclosure

W10. Sign off

W-FI

(W-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.

W10.1

(W10.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Sustainability Director, Safety Health and Environment and D&I Director	EHS manager

W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].
No

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

Please confirm below

I have read and accept the applicable Terms