Johnson Matthey - Water 2018

W0. Introduction

W0.1

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

Johnson Matthey is a leader in sustainable technologies. Today, some 86% of the group's sales represent products and services which provide sustainability benefits through their positive impact on the environment, resource efficiency or our health, as determined by their alignment with the UN SDGs.

Our business is divided into four sectors for reporting purposes, based around the four different applications of our products:

1. Clean Air Sector - catalysts for gasoline and diesel powered vehicles, including hybrids, trucks buses, non-road machinery and stationary equipment

2. Efficient Natural Resources Sector - Catalyst Technologies and additives, licenses process technology and services to the chemical and oil & gas industry; precious metal marketing, distribution, refining and recycling services to a wide variety sectors from chemicals to jewellery; Advanced Glass pastes and enamels primarily for the automotive industry

3. Health Sector - Leading provider of complex chemistry solutions to generic and innovator pharmaceutical companies; develops and manufactures active pharmaceutical ingredients (APIs) for a variety of treatments

4. New Markets Sector - provides battery materials for automotive applications and battery systems for a range of non automotive applications; fuel cell technologies for automotive and stationary applications; Medical Device Components and advanced catalysts derived from precious metals to the pharmaceutical and agricultural chemicals markets

We have operations in over 30 countries and employ around 13,000 people worldwide.

Our latest annual integrated report can be found at https://matthey.com/-/media/files/investors/reports/annual-report-2018/annual-report-2018.pdf For more information about Johnson Matthey, see our corporate website : www.matthey.com

W-CH0.1a

(W-CH0.1a) Which activities in the chemical sector does your organization engage in?

Specialty inorganic chemicals
Other, please specify (catalysts for the chemicals industry)

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	April 1 2017	March 31 2018

W0.3

(W0.3) Select the countries/regions for which you will be supplying data.

Argentina
Australia
Brazil
Canada
China
China, Hong Kong Special Administrative Region
Finland
Germany
India
Israel
Japan
Malaysia
Mexico
Netherlands
Poland
Republic of Korea
South Africa
Sweden
Switzerland
Thailand
United Kingdom of Great Britain and Northern Ireland
United States of America
Other, please specify (North Macedonia)

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 financial control is exercised

W0.6

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

No

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	Important	Important	We need good quality water to support our agricultural operations, growing agro-crops for our opiate manufacturing business. However, this business represents less than10% of our sales revenues
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Vital	All our manufacturing operations require a supply of clean water. In many cases we can, and do, use recycled water and perform the final purification step on site. All our strategic suppliers use water to perform their own mining or manufacturing operations to produce our raw materials; Some of our customers require large volumes of water for their manufacturing or processing operations using our products

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	100%	All sites operated Johnson Matthey are required to report their total water withdrawals to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water withdrawals – volumes from water stressed areas	100%	This includes all JM manufacturing facilities sites that are "water stressed" as defined using the WBCSD Water stress tool 2015. All JM manufacturing sites where the annual renewable water supply in 1995 was less than 1,700 m3 per person per year are included.
Water withdrawals – volumes by source	100%	All sites operated Johnson Matthey are required to report their total water withdrawals by source to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Produced water associated with your metals & mining sector activities - total volumes	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	All sites montior the quality of their incoming water to ensure it is fit for purpose. However, we do not collate information on water withdrawal quality at Group level, as it is not a useful KPI. All sites locally determine whether the water they are withdrawing of adequate quality to use for the purpose they require
Water discharges – total volumes	100%	All sites operated Johnson Matthey are required to report their total water discharges to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water discharges – volumes by destination	100%	All sites operated Johnson Matthey are required to report their total water discharges by destination to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water discharges – volumes by treatment method	100%	All sites operated Johnson Matthey are required to report their total water discharges to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water discharge quality – by standard effluent parameters	51-75	The majority of our manufacturing sites monitor water discharge quality using the COD method . Our sites manufacturing active pharmaceutical ingredients perform more detailed speciation analysis of wastewater on discharge.
Water discharge quality – temperature	Not monitored	This occurs at some manufacturing sites according to local permit requirements, but we do not collate information about it at Group level.
Water consumption – total volume	100%	All sites operated Johnson Matthey are required to report their total water consumption to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water recycled/reused	100%	We monitor the recycling of water on our manufacturing sites, where the water passes through one of our on-site wastewater treatment facilities. We do not monitor re-use of water on a plant where there is no water treatment step necessary between uses.
The provision of fully-functioning, safely managed WASH services to all workers	100%	All JM manufacturing sites offer fully-functioning, safely managed WASH services to all workers. In most of our facilities which handle chemicals, changing, washing and showering is a mandatory requirement for all workers before leaving a facility.

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	2729	About the same	The total water withdrawals from all sources increased by 3% compared to previous year. This increase is within the accuracy of the readings.
Total discharges	1355	About the same	The total water discharges from all sources increase by 3% compared to previous year. This decrease is within the accuracy of the readings. This number is affected by annual variations in rainfall at some sites
Total consumption	1137	About the same	This is the difference between water withdrawals and water discharges from/to all external sources. This is a 7% increase on last year. This number is affected by annual variation in rainfall at some sites

W1.2d

(W1.2d) Provide the proportion of your total withdrawals sourced from water stressed areas.

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	52	About the same	WBCSD Global Water Tool	This includes all JM sites that are "water stressed" as defined using the WBCSD Water stress tool 2015. All JM manufacturing sites where the annual renewable water supply in 1995 was less than 1,700 m3 per person per year are included.

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	50	Higher	Increased by 14%. We only have 1 sites that uses fresh surface water and it is returned to the same river immediately after use.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	We don't use any brackish surface water/seawater
Groundwater – renewable	Relevant	132	Higher	This number has increased by 30% because a new manufacturing facility using renewable groundwater has come on line this year. The total number of sites in this category is now 6.
Groundwater – non-renewable	Relevant	57	Lower	Decreased by 3%. Only 3 JM sites fit into this category.
Produced water	Not relevant	<Not Applicable>	<Not Applicable>	We do not produce any water according to CDP definition..
Third party sources	Relevant	2489	About the same	This is clean water purchased from municipal authorities. It has increased by 2% this year, which is within the error margins of the measurement.

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	Relevant	208	Lower	Decreased by 3%
Brackish surface water/seawater	Relevant	29	Much higher	This is increased by 185% because we have had a new manufacturing plant come online which sends wastewaste to seawater. This increases the number of manufacturing sites reporting in this category to 2.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	
Third-party destinations	Relevant	1355	About the same	This number has decrease by 3% which is within the error margins of the measurement globally. At some sites this number is influenced by variations in rainfall.

W1.2j

(W1.2j) What proportion of your total water use do you recycle or reuse?

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	11-25	Higher	This only counts water that is recycled after treatment in one of our on-site water treatment facilities. it does not include water re-used without treatment as this is rarely metered. This number represents a 5% increase on last year.

W-CH1.3

(W-CH1.3) Do you calculate water intensity for your activities in the chemical sector?

Yes

W-CH1.3a

(W-CH1.3a) For your top five products by production weight/volume, provide the following water intensity information associated with your activities in the chemical sector.

Product type
Specialty inorganic chemicals

Product name
vehicle emissions exhaust catalysts

Water intensity value
0.01

Numerator: water aspect
Total water withdrawals

Denominator: unit of production
Ton

Comparison with previous reporting year
About the same

Please explain
Water use in catalyst production is very small.

Product type
Specialty inorganic chemicals

Product name
catalysts for the bulk chemicals industry

Water intensity value
0.03

Numerator: water aspect
Total water withdrawals

Denominator: unit of production
Ton

Comparison with previous reporting year
About the same

Please explain
Water use in catalyst production is very small.

W1.4

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

W1.4a

(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?

Row 1

% of suppliers by number
1-25%

% of total procurement spend
26-50

Rationale for this coverage
In 2017/18, 97 supplier sustainability assessments were undertaken across our sectors. These comprised formal on-site audits, desktop assessments and supplier self-assessments. These assessments represent approximately 30% of JM's direct materials spend with suppliers. It is early days in our supplier sustainability development program and we have not yet reached all our suppliers with it. We have a public target is to have 100% of our strategic suppliers compliant with our code of conduct by 2025. These sustainability assessments look at all aspects of supplier's sustainability performance. Information about water impacts and risks forms part of our EHS assessment of our suppliers.

Impact of the engagement and measures of success
Measure of success is that we do not suffer an issues with product quality or supply due to water-related issues at the supplier's manufacturing facilities. We also do not suffer any negative reputational impact from being associated with a supplier that does not manage its water activities to be benefit of its local communities.

Comment

W1.4b

(W1.4b) Provide details of any other water-related supplier engagement activity.

Type of engagement
Onboarding & compliance

Details of engagement
Inclusion of water stewardship and risk management in supplier selection mechanism
Requirement to adhere to our code of conduct regarding water stewardship and management

% of suppliers by number
1-25

% of total procurement spend
26-50

Rationale for the coverage of your engagement
In 2017/18, 97 supplier sustainability assessments were undertaken across our sectors. These comprised formal on-site audits, desktop assessments and supplier self-assessments. These assessments represent approximately 30% of JM's direct materials spend with suppliers. It is early days in our supplier sustainability development program and we have not yet reached all our suppliers with it. We have a public target is to have 100% of our strategic suppliers compliant with our code of conduct by 2025.

Impact of the engagement and measures of success
Measure of success is that we do not suffer an issues with product quality or supply due to water-related issues at the supplier's manufacturing facilities. We also do not suffer any negative reputational impact from being associated with a supplier that does not manage its water activities to be benefit of its local communities.

Comment

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

W-CH3.1

(W-CH3.1) How does your organization identify and classify potential water pollutants associated with its activities in the chemical sector that could have a detrimental impact on water ecosystems or human health?

JM's manufactures and trades in chemicals and finished products into a number of sectors, e.g. pharmaceuticals, catalysis, precious metals, automotive, medical devices etc. Our manufacturing operations around the world are ISO14001 certified, or are working towards achieving certification following acquisition.

JM has corporate policies that require operations to actively manage discharges to surface and ground waters, minimising polluting releases. This requires maintaining an inventory of actual and potential discharges, developing an understanding of their toxicity and potential impacts, and establishment of targets for improvement. Our corporate EHS assurance team undertakes comprehensive audits of our site's compliance with these policy requirements and associated procedures on a regular basis (sites are generally audited every 2-3 years depending on size and type of operation, risk profile etc.). Audit findings are reported via our Group EHS Leadership Committee (Chaired by a JM Board Member) into the Group Management Committee.

Sites will specifically target substances identified on the basis of toxicity, persistence and bioaccumulation, also taking into account specific criteria and substances laid down in applicable legislation, e.g. Water Framework Directive in the EU and site permits. Again, we have corporate policies (which are subject to regular audit), e.g. New Product Introduction – Product Stewardship, which require sites to review toxicity of raw materials, intermediates and finished products as part of the product development process. Materials are classified, by experienced toxicology and regulatory affairs teams, according to the prevailing hazard classification system in the country of operation, which is generally to UN-GHS. As products move to commercial scale, (eco)toxicity data will be generated according to applicable test guidelines in support of chemical notifications/registrations such as EU-REACH. In addition, these data and the associated chemical safety assessments will directly impact the guidance (safety data sheets) issued to customers on how to minimise impacts of potential water pollutants from our products during their use-phase.

Given the nature of our business, it is inorganic and heavy metal substances that constitute the predominant potential water pollutants on our sites. Through our memberships at trade associations such as Eurometaux and Cefic, we are able to monitor developments in regulations, hazard characterisation methodologies e.g. HERAG and MERAG, and risk management measures across relevant sectors to JM.

In 2016/17 we introduced a more detailed reporting system for waste disposal across the group, allowing us the better track and report the considerable efforts our sites are making in minimising their waste streams and disposing of waste in the most responsible way. These data are also helping to highlight areas where additional focus is required, e.g. it has led to the drive to reduce the amount of dilute aqueous hazardous waste from one of our refineries requiring third-party (off-site) treatment.

In 2017 we implemented a programme to review chemistries relevant to JM that may be considered high hazard, or potentially facing regulatory or stakeholder pressures, with an aim of developing a list of substances that require prior approval from senior management before entering into new product R&D with that substance. Potential water pollutants would be candidates for review by the Prior Approval Required Substances (PARS) List Committee, and in fact Chromium compounds were recently reviewed and included on the PARS List.

W-CH3.1a

(W-CH3.1a) Describe how your organization minimizes adverse impacts of potential water pollutants on water ecosystems or human health. Report up to ten potential pollutants associated with your activities in the chemical sector.

Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain
COD	Direct operations	COD = Indirect measure of organic compounds in aqueous effluent & is a useful measure of water quality.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	There are regulated local emission limits at each facility. We ensure that we comply with our legal obligations and (as a minimum) meet or (preferred) surpass the required standards.
Chromium and its compounds	Direct operations Supply chain	Listed under e.g. EU Water Framework Directive, based on toxicological properties.	Compliance with effluent quality standards Providing best practices instructions on product use R&D into less harmful alternative products	Compliance with permits and effluent quality standards. Materials are shipped in compliant packaging as appropriate. Ensuring customers receive robust guidance on product use. Listing of chromium(VI) on our Prior Approval Required Substances list to ensure senior management approve development of any new products involving this substance
mercury	Direct operations	Listed under e.g. EU Water Framework Directive, based on PBT properties. Mercury can be a component of some pgm refinery feedstocks and will be part of our refinery wastestreams. We also utilised mercury in quality control tests in some parts of JM	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	Compliance with permits and effluent quality standards. Materials are shipped in compliant packaging as appropriate. Ensuring customers receive robust guidance on product use. Listing of chromium(VI) on our Prior Approval Required Substances list to ensure senior management approve development of any new products involving this substance
lead	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Lead can be a component of some pgm refinery feedstocks and will form part of the refinery process waste. Lead is also a constituent of one JM product.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.

Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain
cobalt	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Also subject to regulatory scrutiny under EU-REACH etc. Cobalt compounds feature in our product portfolio, for use in catalytic applications under controlled conditions.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.
silver	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Silver products for part of our product portfolio.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.
nickel	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Silver products for part of our product portfolio.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.
copper	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Silver products for part of our product portfolio.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.

Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain
zinc	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Silver products for part of our product portfolio.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.
chlorine	Direct operations Supply chain	Listed under e.g. EU Water Framework Directive, based on PBT properties. Mercury can be a component of some pgm refinery feedstocks and will be part of our refinery wastestreams. We also utilised mercury in quality control tests in some parts of JM	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	Compliance with permits and effluent quality standards. Materials are shipped in compliant packaging as appropriate. Ensuring customers receive robust guidance on product use. Listing of chromium(VI) on our Prior Approval Required Substances list to ensure senior management approve development of any new products involving this substance

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.

Direct operations

Coverage
Full

Risk assessment procedure
Water risks are assessed as a standalone issue

Frequency of assessment
Not defined

How far into the future are risks considered?
>10 years

Type of tools and methods used
Tools on the market

Tools and methods used
WBCSD Global Water Tool

Comment
The risk assessment will be updated each time the WBCSD tool is updated, which is not defined, or if we have a significant change in the geographical locations of our operations.

Supply chain

Coverage
None

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

How far into the future are risks considered?
<Not Applicable>

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment

Other stages of the value chain

Coverage
None

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

How far into the future are risks considered?
<Not Applicable>

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment

W3.3b

(W3.3b) Which of the following contextual issues are considered in your organization's water-related risk assessments?

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	We use the World Business Council for Sustainable Development's Global Water Tool version 1.3, to identify which Johnson Matthey sites are located in areas of high baseline water stress as defined by the World Resources Institute (WRI) model and those that are located in areas of extreme water scarcity as defined by their annual renewable water supply per head of population.
Water quality at a basin/catchment level	Not relevant, included	Local water quality is not a significant issue for our business as 91% of all the water we purchase is domestic grade tap water from local municipal supply.
Stakeholder conflicts concerning water resources at a basin/catchment level	Not relevant, included	Risk assessment for stakeholder conflicts is ongoing at a local site level. Each site has a locally based EHS manager responsible for tracking local issues with water availability and quality and will engage local stakeholders if appropriate. Any issues will be presented to the quarterly meeting of the Group global EHS leadership committee by the local management. They will also be included in the 6-monthly general site risk assessment review. He/she will report any significant issues to the local site manager on an ad hoc basis. We do not have any sites where we are involved in stakeholder conflicts at the moment. As we don't use significant quantities of water at any o f our locations, this is a low risk topic for us.
Implications of water on your key commodities/raw materials	Relevant, always included	Strategic suppliers are identified as those who supply us with an ingredient critical to the functional performance of our products, and one not readily available from alternative sources and/or derived from natural resources in conflict-prone regions of the world, All strategic suppliers have a dedicated supply chain manager responsible for monitoring and discussing all risks relevant to maintaining security of supply, including water risks.
Water-related regulatory frameworks	Relevant, always included	Risk assessment is ongoing at a local site level. Each site has a locally based EHS manager responsible for tracking national / local regulatory matters and will report any significant issues to the Global EHS Leadership Committee on an ad hoc basis.
Status of ecosystems and habitats	Not relevant, included	All sites, as part of their ISO 14001 registration must include an assessment of biodiversity. This has also been assessed using the World Business Council of Sustainable Development's Global Water Tool version 3.1. We only manage one small site of high biodiversity interest globally; it is adjacent to our plant in Billingham UK.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	We offer fully functioning WASH facilities at all our manufacturing sites. These are always factored into Risk assessment as they have a substantial impact on our total water usage.
Other contextual issues, please specify	Not considered	

W3.3c

(W3.3c) Which of the following stakeholders are considered in your organization’s water-related risk assessments?

	Relevance & inclusion	Please explain
Customers	Not relevant, explanation provided	We do not manufacturing any products that have a significant impact on our customers use of water.Most of our products are components for the automotive industry and are assembled into vehicles.
Employees	Relevant, always included	We provide fully functioning WASH facilities to all our employees and they represent a significant proportion of our total water usage. Our employees needs are always included in water risk assessment.JM employees are made aware of water-based issues as part of their awareness training on broader sustainability issues.
Investors	Not relevant, included	We have never had any questions directly from investors about our water risk assessment. Nevertheless, we provide information through CDP and through our company Annual Report to shareholders. see page 40 of https://matthey.com/-/media/files/investors/reports/annual-report-2018/annual-report-2018.pdf
Local communities	Not relevant, explanation provided	We are not a significant water user in any of the communities where we operate.
NGOs	Not relevant, explanation provided	We have not received any requests or comments from NGOs about our water risks. We would include them if we did receive any specific, relevant requests to do so.
Other water users at a basin/catchment level	Relevant, sometimes included	WE consider the impact our water use or discharge has on our neighbours, where we believe any reputational risk could arise.
Regulators	Relevant, always included	Water supply and discharge is always regulated by local environment agencies, and is part of our license to Operate. We always consider the impact change in local regulation could hae on our license to operate as well as on our operating costs.
River basin management authorities	Not relevant, explanation provided	We are not a large user of water in any river basin and so do not have any direct interaction with rain basin management authorities. Any interaction would be indirect and come through the local regulators e.g. The UK Environment Agency or the EPA.
Statutory special interest groups at a local level	Not relevant, explanation provided	We are not a large water user in any location and have not received any requests to join or engage with statutory special interest groups. We would include them if we did receive any specific, relevant requests to do so.
Suppliers	Relevant, always included	When we assess the sustainability of any of our suppliers, we always consider water risks on product quality and security of supply. This is described in more detail in our Supplier Code of Conduct, which can be downloaded from matthey.com.
Water utilities at a local level	Relevant, always included	We purchase water from local water utilities at all our sites, so they are always included in our risk assessments. 92% of all our water purchases and 86% of our effluent discharges are with water utility companies.
Other stakeholder, please specify	Not considered	

W3.3d

(W3.3d) 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.

We assess water risks using two independent processes: 1. water risk assessment is fully integrated into multi-disciplinary company-wide risk identification, assessment, and management processes. At site level we continually

review the level of risk throughout the business

and complete a formal submission every six

months for reporting purposes. Our Risk process is described in full on pages 76 - 77 of our Annual Report https://matthey.com/-/media/files/investors/reports/annual-report-2018/annual-report-2018.pdf

2. We also perform a separate regular assessment (every 3-5 years) of longer-term water related risks through in-house analysis using open source evaluation tools principally the WBCSD global water tool. This is done for all our manufacturing sites based on their geographical location and current water usage. The findings are then communicated to our business sectors and sites so they can be integrated into the multi-disciplinary company-wide risk assessment process that occurs every 6 months. This is was last performed in 2016. It will be performed again when an updated version of the tool is launched by WBCSD or when we have a substantial change in our portfolio of manufacturing operations, whichever happens sooner.

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, both in direct operations and the rest of our value chain

W4.1a

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

All risks are scored using a standardised scoring methodology (1-5), which operates on two levels:

1. Principal risk level

2. Operational business risk level

Both of these methodologies require risk to be scored on both financial and strategic level.

Water availability or cost is not a principal business risks to our company. as we are relatively low user of water in all the regions in which we operate, and none of our products requires large amounts for production (see responses elsewhere in disclosure for evidence) in our own operations.

Water risks are only identified at the Operational risk level. Therefore, operational risks identified at strategic sites are the only ones that meet the criteria to be included in response to W1.4.

We have 8 (out of 53) sites that are classified as "strategic " because their failure could have a substantive financial impact on the business.

These substantive sites are comprised of :

1. our platinum group metal refineries, which are strategic because they supply precious metal (as a critical raw material) to the rest of our global manufacturing facilities;

2. our global research centre because of its importance to our long term profitability

3. those manufacturing facilities that are our largest individual contributors to our revenues/profits (as a percentage of total profits) . The individual financial contributions to the Group profits for each of these manufacturing sites is commercially sensitive and thus confidential.

We define strategic suppliers as those suppliers of raw material that are critical to the operation of our strategic products. We assess them for water risk as we do our own operations.

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	Only one of our Strategic sites is situated in a region of extreme water stress, as defined by the WBCSD risk assessmenttool.

W4.1c

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

Country/Region
United Kingdom of Great Britain and Northern Ireland

River basin
Thames

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
1-25

Comment

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/Region
United Kingdom of Great Britain and Northern Ireland

River basin
Thames

Type of risk
Physical

Primary risk driver
Drought

Primary potential impact
Disruption to sales

Company-specific description
WBCSD Global Water Tool identifies sites in the Greater London Area as in a region of extreme water scarcity (<500 m3 renewable water available per person per year). However, the water network in the UK is very advanced and so the risk of disruption to supply is extremely as disrupted due to prolonged drought, then production would cease and this would have a knock on effect on other JM sites, which use precious metals from our Brimsdown refinery as part of their supply chain. At a local level this risk is extremely low, but the impact would be severe due strategic nature of the site.

Timeframe
Current up to 1 year

Magnitude of potential impact
Medium-high

Likelihood
Exceptionally unlikely

Potential financial impact
0

Explanation of financial impact
This is confidential.

Primary response to risk
Amend the Business Continuity Plan

Description of response
The Business Continuity plans are our principal management tool to reduce the risk of "Failure of a significant site", along with annual testing of the plan. They includes a plan to transfer operations to one of our other refineries in the event of a long shut down due to lack of water availability. Other Johnson Matthey sites that use precious metals from our Brimsdown refinery as an input raw material also take this risk into account in their Business Continuity plans. The risk of failure of the refinery is taken into account when deciding how much reserves of precious metal to hold in reserve stock, both physically and on accounts. We also insure our strategic sites against a wide variety of failures.

Cost of response
0

Explanation of cost of response
This is confidential, but it is considered a part of normal business management.

W4.2a

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

Country/Region
South Africa

River basin
Limpopo

Stage of value chain
Supply chain

Type of risk
Regulatory

Primary risk driver
Increased difficulty in supplier obtaining withdrawals/operations permit

Primary potential impact
Disruption to sales due to value chain disruption

Company-specific description
Virgin precious metals from South African platinum group metal mining companies are a strategic raw material for Johnson Matthey. If mining operations were disrupted for a long period due to lack of water, it would have an impact on our ability to procure raw materials for our own manufacturing processes. More likely is that a short disruption would cause the metal price to rise on global markets.

Timeframe
Current - up to 1 year

Magnitude of potential financial impact
Medium-low

Likelihood
Unlikely

Potential financial impact
0

Explanation of financial impact
Disruption to supply of virgin platinum from South Africa is most likely to impact Johnson Matthey via the metals trading price on global markets. Johnson Matthey, through its metal trading activities is well placed to manage the impact of fluctuating metal prices on its revenues.

Primary response to risk
Include in Business Continuity Plan

Description of response
Strengthening supplier relationship management, regular reviews to discuss supplier capacity constraints. • Continuing to build expertise in supply chain, logistics, procurement and trade export controls. • Supplier quality management processes. • Safety stocks held in strategic locations. • Research and development to consider alternative materials. • Business continuity management, identification of critical failure risks and plans in place to manage these.

Cost of response
0

Explanation of cost of response
This is part of "normal business" and is not assigned a cost.

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?

Yes, we have identified opportunities, and some/all are being realized

W4.3a

(W4.3a) Provide details of opportunities currently being realized that could have a substantive financial or strategic impact on your business.

Type of opportunity
Products and services

Primary water-related opportunity
Sales of new products/services

Company-specific description & strategy to realize opportunity
Small business opportunities arising from our water purification technologies in the marketplace.

Estimated timeframe for realization
Current - up to 1 year

Magnitude of potential financial impact
Low

Potential financial impact

Explanation of financial impact
Commercially confidential

W5. Facility-level water accounting

W5.1

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

Facility reference number
Facility 1

Facility name (optional)
Brimsdown

Country/Region
United Kingdom of Great Britain and Northern Ireland

River basin
Thames

Latitude
51.65

Longitude
-0.03

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)
245

Comparison of withdrawals with previous reporting year
Higher

Total water discharges at this facility (megaliters/year)
97

Comparison of discharges with previous reporting year
Lower

Total water consumption at this facility (megaliters/year)
148

Comparison of consumption with previous reporting year
Higher

Please explain
During the last year we identified a significant sub surface leak on the site, which caused our metered water withdrawals and consumption to increase. Work in underway to fix this leak. Our water effluent decreased during the year, due to better effluent control requiring less water use.

W5.1a

(W5.1a) For each facility referenced in W5.1, provide withdrawal data by water source.

Facility reference number
Facility 1

Facility name
Brimsdown

Fresh surface water, including rainwater, water from wetlands, rivers and lakes
0

Brackish surface water/seawater
0

Groundwater - renewable
0

Groundwater - non-renewable
0

Produced water
0

Third party sources
245

Comment
All water used comes from local municipal supplier

W5.1b

(W5.1b) For each facility referenced in W5.1, provide discharge data by destination.

Facility reference number
Facility 1

Facility name
Brimsdown

Fresh surface water
0

Brackish surface water/Seawater
0

Groundwater
0

Third party destinations
97

Comment

W5.1c

(W5.1c) For each facility referenced in W5.1, provide the proportion of your total water use that is recycled or reused, and give the comparison with the previous reporting year.

Facility reference number
Facility 1

Facility name
Brimsdown

% recycled or reused
Not monitored

Comparison with previous reporting year
About the same

Please explain
There is no water metering within the plant to measure how much water is re-used.

W5.1d

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

Water withdrawals – total volumes

% verified
76-100

What standard and methodology was used?
Johnson Matthey's water disclosures have been externally assured by Carbon Smart Ltd using ISAE 3000. It has been completed in accordance with the WRI best practice reporting principles of relevance, completeness, consistency, transparency, accuracy and the subject matter adheres to the ISAE 3410 principles

Water withdrawals – volume by source

% verified
76-100

What standard and methodology was used?
Johnson Matthey's water disclosures have been externally assured by Carbon Smart Ltd using ISAE 3000. It has been completed in accordance with the WRI best practice reporting principles of relevance, completeness, consistency, transparency, accuracy and the subject matter adheres to the ISAE 3410 principles

Water withdrawals – quality

% verified
Not verified

What standard and methodology was used?

Water discharges – total volumes

% verified
Not verified

What standard and methodology was used?

Water discharges – volume by destination

% verified
Not verified

What standard and methodology was used?

Water discharges – volume by treatment method

% verified
Not verified

What standard and methodology was used?

Water discharge quality – quality by standard effluent parameters

% verified
Not verified

What standard and methodology was used?

Water discharge quality – temperature

% verified
Not verified

What standard and methodology was used?

Water consumption – total volume

% verified
76-100

What standard and methodology was used?
Johnson Matthey's water disclosures have been externally assured by Carbon Smart Ltd using ISAE 3000. It has been completed in accordance with the WRI best practice reporting principles of relevance, completeness, consistency, transparency, accuracy and the subject matter adheres to the ISAE 3410 principles

Water recycled/reused

% verified
Not verified

What standard and methodology was used?

W6. Governance

W6.1

(W6.1) Does your organization have a water policy?
Yes, we have a documented water policy, but it is not publicly available

W6.1a

(W6.1a) Select the options that best describe the scope and content of your water policy.

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of water-related performance standards for direct operations	We have a waste water management policy, which is attached here. wastewatermanagementpolicy130718.pdf

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) of the individual(s) on the board with responsibility for water-related issues.

Position of individual	Please explain
Director on board	John Walker, executive director - John is MD of our largest sector (Clean Air) . He is also responsible at the board level for EHS (Environment, Health & Safety) Matters. Subject matter expertise is provided to the board through company experts within the EHS and sustainability functions.

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 business plans Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy	

W6.3

(W6.3) Below board level, provide the highest-level management position(s) or committee(s) with responsibility for water-related issues.

Name of the position(s) and/or committee(s)
Chief Executive Officer (CEO)

Responsibility
Assessing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
Annually

Please explain
The CEO chairs the JM Group Management Committee (GMC) - the highest governance body below the board. At least annually the group sustainability function provides an update to the GMC and board on all sustainability related matters including issues relating to water.

W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4

(W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

No, and we do not plan to introduce them in the next two years

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?

Yes, trade associations

W6.5a

(W6.5a) What processes do you have in place to ensure that all of your direct and indirect activities seeking to influence policy are consistent with your water policy/water commitments?

A company expert is assigned to manage our relationship with each trade Association to which we subscribe. It is their responsibility to monitor and participate in consultations on policy with the Trade Association and to highlight to the JM's EHS leadership committee if the Trade Association is carrying out activities that contravene JM's internal policy and values. We review our membership of all trade associations on an annual basis when the membership fee is due.

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	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	Although water use was identified in our most recent stakeholder engagement process (materiality mapping), it is not considered our highest priority category of issues.
Strategy for achieving long-term objectives	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	see above
Financial planning	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	see above

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?

	Water-related CAPEX (+/- % change)	Anticipated forward trend for CAPEX (+/- % change)	Water-related OPEX (+/- % change)	Anticipated forward trend for OPEX (+/- % change)	Please explain
Row 1	100	0	0	0	Water CAPEX expenditure has increased this year, because we did not have any expenditure last year.We expect an increase in expenditure on water treatment faciltiies but cannot characterise this number as a percentage with zero as a denominator. CAPEx expenditure relates to enhancing our on-site water treatment facilities.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	No plans for the next two years	

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

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	Site/facility specific targets and/or goals	None are monitored at corporate level	In 2017 we completed a 10 year program to halve our water usage per unit sales. We successfully reached this target in 2017. We continue our ambition to use water as efficiently as possible but have not set a new company-wide water reudction target. All business and sites are being encouraged to set their own targets for water efficiency locally. As our businesses are very diverse the level of opportunity for reduction is also varied. We continue to monitor and publicly report water use at the corporate level.

W9. Linkages and trade-offs

W9.1

(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?

Yes

W9.1a

(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.

Linkage or tradeoff
Tradeoff

Type of linkage/tradeoff
Increased energy use

Description of linkage/tradeoff
In order to decrease the amount of effluent we discharge for treatment by third parties, we need to do more water treatment on site, and that requires additional energy purchases. Additional energy purchases can lead to a larger operational (scope 1+2) carbon footprint, depending on the local availability of green energy.

Policy or action
The decision on whether to treat effluent on site or discharge it for treatment by 3rd parties is governed by our normal CAPEX investment rules, unless there is an legislative imperative.

W10. Verification

W10.1

(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?
Yes

W10.1a

(W10.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1. Current state	Total water withdrawal	ISAE3000	Our Total water withdrawals were third party verified by Carbon smart Ltd. The verification statement can be found on our website at https://matthey.com/-/media/files/investors/reports/annual-report-2018/assurance-statement-carbon-smart-2018.pdf?la=en&hash=CE44BD54ED86315D45DF8CBAD5EE352C6A07A1DA

W11. 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.

W11.1

(W11.1) Provide details for the person that has signed off (approved) your CDP water response.

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

W11.2

(W11.2) 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

SW. Supply chain module

SW0.1

(SW0.1) What is your organization's annual revenue for the reporting period?

	Annual revenue
Row 1	14122000000

SW0.2

(SW0.2) Do you have an ISIN for your organization that you are willing to share with CDP?

Yes

SW0.2a

(SW0.2a) Please share your ISIN in the table below.

	ISIN country code	ISIN numeric identifier (including single check digit)
Row 1	GB	00BZ4BQC70

SW1.1

(SW1.1) Have you identified if any of your facilities reported in W5.1 could have an impact on a requesting CDP supply chain member?

This is confidential

SW1.2

(SW1.2) Are you able to provide geolocation data for your site facilities not already reported in W5.1?

No, this is confidential data

SW2.1

(SW2.1) Please propose any mutually beneficial water-related projects you could collaborate on with specific CDP supply chain members.

SW2.2

(SW2.2) Have any water projects been implemented due to CDP supply chain member engagement?

No

SW3.1

(SW3.1) Provide any available water intensity values for your organization's products or services across its operations.

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to	Are you ready to submit the additional Supply Chain Questions?
I am submitting my response	Public	Investors Customers	Yes, submit Supply Chain Questions now

Please confirm below

I have read and accept the applicable Terms