Ferguson plc - Climate Change 2020

C0. Introduction

C0.1

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

Ferguson plc is the largest specialist trade distributor of plumbing and heating products to professional contractors and a leading supplier of building materials to the professional market. The Group primarily purchases pre-assembled products such as industrial pipes, valves and fittings, plumbing supplies, heating ventilation equipment, and building materials. The products are then delivered to Group branches or regional distribution centers for onward sale to customers either against order or over the counter, and they may be collected by the customer or delivered to a site. The Group typically contracts with local, as well as international, suppliers for products. Contracts with customers range from individual purchases to supply arrangement for entire systems of plumbing and heating systems. The Group distributes and supplies products in the residential, commercial, civil/infrastructure and industrial sectors.

C0.2

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

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	August 1 2018	July 31 2019	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas for which you will be supplying data.

Canada
United Kingdom of Great Britain and Northern Ireland
United States of America

C0.4

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

USD

C0.5

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

Financial control

C1. Governance

C1.1

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

Yes

C1.1a

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

Position of individual(s)	Please explain
Other C-Suite Officer	The Chief Marketing Officer is the corporate officer with the responsibility for sustainability and climate-related issues. He is a member of the Executive Leadership Committee (http://www.fergusonplc.com/en/who-we-are/our-leadership/executive-committee.html#item8) and serves on the Sustainability Leadership Council, a cross-functional executive steering committee which oversees organizational performance on sustainability goals and objectives. This group reviews metrics including carbon performance, waste performance, customer inquiries, shareholder inquiries, and receives project updates. Critically, the members of this committee also participate on the Risk Committee and the Financial Review Committee, which approve all capital expenditures. Sustainability risks are evaluated with other corporate risks and incorporated onto the company's Risk Register as appropriate.
Chief Executive Officer (CEO)	Our Group CEO is the signatory of the Ferguson Sustainability Policy, and ultimately holds responsibility in respect to performance on climate-related issues. An excerpt from the policy states "We commit to the following: • Setting targets, monitoring and reporting performance for carbon emissions and initiating improvement projects for our largest opportunities. • Partnering with our suppliers to prioritize sustainability in their operations and products. • Monitoring market opportunities for environmentally-beneficial products and educating our customers on products that offer sustainability benefits. • Serving as an active corporate citizen and investing in the communities that we serve globally, prioritizing social investment that aligns with our products and services. Transparent and clear reporting on our sustainability goals is important to our customers, associates, shareholders, suppliers and communities. Therefore, we include sustainability data in our Annual Report of Accounts each year and integrate sustainability considerations into the investments we make. Consistent with the recommendations from the Task Force for Climate-Related Financial Disclosures (TCFD), we will also disclose our risks and opportunities related to climate change. We will use technologies and operational practices that improve efficiency and reduce environmental impacts and emissions. We will conserve resources and seek to minimize waste before reusing and recycling materials. Additionally, we will consider the environment when making capital investments and integrate sustainability features whenever possible. " An example of an action that our CEO took to advance Ferguson's commitment to climate-related issues was to publicly support the recommendations of the Taskforce for Climate-related Financial Disclosures (TCFD).
Board-level committee	The Board has set targets for Ferguson plc's carbon and waste performance, and receives updates at least twice a year regarding Group performance. These updates include reviewing project implementation and performance, and opportunities to integrate sustainability measures into capital expenditures. An example of an action that the Board took to advance Ferguson's commitment to climate-related issues was to vote in support of the CEO publicly supporting the recommendations of the Taskforce for Climate-related Financial Disclosures (TCFD).

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues Other, please specify (Business marketing plans, where relevant)	<Not Applicable>	The Board has set targets for Ferguson plc's carbon and waste performance, and receives updates at least twice a year regarding Group performance. These updates include reviewing project implementation and performance, and opportunities to integrate sustainability measures into capital expenditures. The Group CEO, Chief Marketing Officer and Director of Sustainability have the ability to add additional agenda items for Board consideration as needed. The Board also receives updates on developments in climate-related reporting through the Group Legal and Co Sec Board Report.

C1.2

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

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Sustainability committee	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Quarterly
Other, please specify (Environment/Sustainability Director)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly
Other C-Suite Officer, please specify (Chief Marketing Officer)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	As important matters arise
Chief Executive Officer (CEO)	<Not Applicable>	Assessing climate-related risks and opportunities	<Not Applicable>	As important matters arise
Risk committee	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	Half-yearly

C1.2a

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

As reported in C1.1a, sustainability reports into the Chief Marketing Officer (CMO), who is a member of the Executive Committee, which is the highest level non-Board committee. The CMO reports to the CEO, who holds responsibility in respect to performance on climate-related issues. Sustainability was placed in Marketing at Ferguson so that sustainability issues were not approached as compliance requirement, but rather as a business strategy vital to our associates, our operations and our products. The Marketing Department has direct relationships with each business group in the organization, and because Corporate Communications is also overseen by the Chief Marketing Officer, this gives Sustainability an unparalleled reach to our stakeholders.

Similar to the Board, the Executive Committee receives updates from the Director of Sustainability regarding strategy, performance against targets, risks and opportunities at least twice each fiscal year. For example, the Executive Committee reviewed and approved Ferguson's TCFD disclosure in FY19, our initial disclosure on Ferguson's risks and opportunities related to climate change. The Executive Committee also reviewed performance versus the sustainability strategic plan. This plan includes strategies for associate engagement, improvement initiatives to reduce waste and carbon emissions (including renewable energy projects and fleet upgrades), and product development strategies. This strategy was intentionally designed to integrate with the corporate Strategic Framework, which guides the business development plan for the organization.

In addition to this leadership, a cross-functional executive steering committee has been established, which oversees organizational performance on sustainability goals and objectives. The committee, which meets quarterly, includes the the CEO, COO, CIO, CFO, CHRO, CLO, CMO, SVP of Blended Branches, SVP of Business Development, SVP of Supply Chain, and VP of Communications and Public Relations. This group reviews metrics including carbon performance, waste performance, customer inquiries, shareholder inquiries, and receives project updates. Critically, the members of this committee also participate on the Risk Committee, which reports directly to the Board Audit Committee and the Financial Review Committee, which approve all capital expenditures. Sustainability risks are evaluated with other corporate risks and incorporated onto the company's Risk Register according to ranking. We report publicly on our Risk Management in both our Annual Report of Accounts and website. Our principal risks include sustainability issues such as Health & Safety and talent management and retention: http://www.fergusonplc.com/en/investors-and-media/risk-management.html. In addition to these internal controls, the Sustainability Leadership Council is responsible for reviewing sustainability performance including MSCI, CDP, DJSI, and ISS scoring.

Each primary geographic area of the business has also formed Sustainability Action Teams, which not only provide data for reporting, but also propose projects to improve sustainability performance. Members of the Sustainability Action Teams include the Hazardous Waste Manager for each region, Procurement Managers responsible for energy and waste procurement, Fleet Manager, Outsourced Transportation Manager, Travel Manager, Logistics Manager, Real Estate and Facilities Manager, the Philanthropy Manager and the Diversity and Inclusion Manager. These groups implement projects to meet our business objectives and improve data collection and accuracy. They work closely with our third-party environmental auditors, which conduct our annual data verification, and reviews Ferguson's operations and reporting. Each member has well-defined processes and procedures for data collection, and all findings and corrective actions regarding the environmental audit are reviewed in detail by the Sustainability Leadership Council.

Sub-Committees are formed as necessary to pull in the appropriate subject matter experts for their input on climate-related reporting. For example, stakeholders essential to the Task Force for Climate-Related Disclosures are interviewed in both group and individual settings by the Director of Sustainability to ensure that the risks and opportunities specific to Ferguson are captured. Climate-related issues are also monitored by the Director of Security, who leads efforts for disaster response throughout the company, and works directly with the CLO and Director of Sustainability to ensure that business continuity and resiliency strategies are in place.

C1.3

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

	Provide incentives for the management of climate-related issues	Comment
Row 1	No, and we do not plan to introduce them in the next two years	We intend to integrate this performance into standard operations procedures throughout the business.

C2. Risks and opportunities

C2.1

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

Yes

C2.1a

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

	From (years)	To (years)	Comment
Short-term	0	3	Each area of the business has a Strategic Plan, and also has Business Risks evaluated with a 3 year time horizon.
Medium-term	3	5	Medium-term is described at 3-5 years at Ferguson plc.
Long-term	5	20	Ferguson's TCFD response has considered risks and opportunities relevant to the business within the next 20 years.

C2.1b

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

As outlined on page 152 of our 2019 Annual Report, materiality for Group financial statements is $70 million which is approximately 5% of profit before tax excluding exceptional items and impairment of interests in associates. The profit before tax excluding exceptional items and impairment of interests in associates was $1,424 million, which was $100 million higher than statutory profit. Profit before tax is a key metric for users of the financial statements and adjusting for exceptional items and impairment of interests in associates is to reflect the manner in which business performance is reported and assessed by external users of the financial statements.

$28 million for Company financial statements was determined on the basis of the Company's net assets. This was then capped at 40% of Group materiality.

C2.2

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

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

A specific climate-related risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

Climate-related Risks and Opportunities are identified in alignment with the TCFD guidelines. We consider the transition and physical risks associated with both a 'current policies' scenario consistent with Ferguson's scenario analysis considers a 2 degrees C scenario and a 4 degrees C scenario, which were chosen to contrast the substantial shifts needed to reach a 2 degree C scenario, as opposed to a business as usual scenario. Our analysis approach included tools from multiple scenarios including DDPP, RCP 2.6 and RCP 8.5. Key impact categories are identified by the Sustainability Department and then impacts are explored deeper with subject matter experts within the company (like Fleet, Investor Relations, and Finance). The company-level assessment does include considerations of key assets, primarily key distribution centers and IT systems. In addition, approximately 20-25 of these key sites are subject to individual risk assessments for natural catastrophe and other physical risks each year. An example of mitigation for physical risks, including extreme weather events, is our Business Continuity strategy. Our physical locations are managed on a tiered basis, with the Tier I facilities scoring the highest importance. Resiliency strategies regarding these critical locations have been implemented by the Risk Management group and the Real Estate and Facilities team, including backup generators and emergency contact systems. However, accessibility due to regional difficulties (flooded roads, washed-out bridges, etc) will continue to pose access concerns in getting products to the communities that are trying to rebuild following a natural disaster. These resiliency strategies have already proved effective in areas impacted by severe weather, like when our headquarters in Newport News, Virginia faced a power outage due to storm events and was able to resort to backup generators. Regarding transition risks, changing technology around customer product certifications and sustainability performance pose a risk to Ferguson if we are unable to quickly provide products that meet customer specifications. However, this transition has also allowed for new product development to grow our product portfolio in line with the more efficient products that consumers are purchasing.

C2.2a

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The Group's operations are affected by various statutes, regulations and standards in the countries and markets in which it operates. The amount of such regulation and the penalties can vary. While the Group is not engaged in a highly regulated industry, it is subject to the laws governing businesses generally, including laws relating to competition, product safety, data protection, labor and employment practices, accounting and tax standards, international trade, fraud, bribery and corruption, land usage, the environment, health and safety, transportation and other matters. Violations of certain laws and regulations may result in significant fines and penalties and damage to the Group's reputation. The most significant change in the level of regulation applying to the Group this year is the EU's adoption of the General Data Protection Regulation (GDPR). The Group has adopted procedures and controls required by the legislation to ensure compliance. Anti-bribery and anti-corruption practices in all businesses were reviewed during the year and the findings reported to the Executive Committee and to the Audit Committee. Regulations were identified as the highest severity risk in our 2019 Annual Report and Accounts. One specific risk Ferguson has identified is the rise of commercial building energy efficiency ordinances at major cities. We have multiple locations which are subject to annual energy benchmarking requirements. Some examples include two branches in Austin, TX subject to the Energy Conservation Audit and Disclosure Ordinance; a branch in Atlanta, GA subject to the Atlanta Commercial Buildings Energy Efficiency Ordinance; and a branch in Portland, OR subject to Ordinance No. 187095 regarding Energy Performance Reporting Policy for Commercial Buildings. Compliance with these regulations has given us an occasion to track energy usage at large commercial locations and propose improvements to reduce carbon emissions and operational costs.
Emerging regulation	Relevant, sometimes included	The Group's operations are affected by various statutes, regulations and standards in the countries and markets in which we conduct business. The amount of such regulation and the penalties can vary. We closely monitor proposed regulations and policy developments regarding climate change, waste reduction and environmental compliance. The Group monitors the law across its markets to ensure the effects of changes are minimised and the Group complies with all applicable laws. The Group aligns company-wide policies and procedures with its key compliance requirements and monitors their implementation. Briefings and training on mandatory topics and compliance requirements including anti-trust, anti-bribery and corruption are undertaken. Regulations were identified as the highest severity risk in our 2019 Annual Report and Accounts. One type of emerging climate-related regulation which we consider in the risk process is greenhouse gas regulation. We have seen regulations emerge at the city and state level such as California signing in to law a commitment to be 100% carbon-free by 2050 and New York's bill to limit greenhouse gas emissions for existing large buildings (https://legistar.council.nyc.gov/LegislationDetail.aspx?ID=3761078&GUID=B938F26C-E9B9-4B9F-B981-1BB2BB52A486&Options=&Search=) and expect similar regulations to emerge across the United States over time. These regulations are a short term financial risk for capital expenditures, but we expect compliance to save on operational spend over time and assist with our attainment of long term sustainability goals. The International Maritime Organization's mandate that all ocean carriers must switch to burning fuel with a sulfur content of less than .5% on Jan 1, 2020 also plays in to our business risk calculations. http://www.imo.org/en/mediacentre/hottopics/pages/sulphur-2020.aspx Refrigerant management
Technology	Relevant, always included	New competitors and technology were assigned a high inherent risk level in our Annual Report and Accounts 2019. Wholesale and distribution businesses in other industry sectors have been disrupted by the arrival of new competitors with lower-cost transactional business models or new technologies to aggregate demand away from incumbents. The Board is attuned to both the risks and opportunities presented by these changes and is actively engaged as the Group takes action to respond. A dedicated team and increased resources were allocated to the exploration and incubation of new business models and new technologies. The creation of Ferguson Ventures allows us to partner with start-ups and our innovation lab explores emerging technologies. Ferguson Ventures has established a partnership with GTP Services, a company that provides software and services for Building Information Modelling. BIM is a process for creating and managing information on a construction project across the building lifecycle. The Group develops and invests in new business models, including e-commerce, to respond to changing customer and consumer needs. This will allow the Group to accelerate the time to market for new revenue streams and gain insight on new disruptive technologies and trends. The Group remains vigilant to the threats and opportunities in this space. The development of new business models in our market place is closely evaluated – both for investment potential and threats. Automation is another technology which may increase operational efficiency, but may disrupt our current labor model which relies on associates picking goods at our distribution centers. The development of automation technology at distribution centers impacts business because we may have to restructure the layout of our existing distribution centers in a way that facilitates this technology and allows for greater operational efficiency.
Legal	Relevant, always included	The Group's operations are affected by various legal considerations in the countries and markets where we conduct business. We always evaluate the impact of current regulations concerning climate change, waste reduction, and environmental compliance. Both our Director of Sustainability and our Governance and Regulatory Analyst on our legal team scan for new regulations that would impact our business, and flag them in the internal Risk Management process as appropriate. In the US, we generally keep up to date with legal/regulatory changes by monitoring the Federal Register and alerts from law firms and other third party resources. Examples of regulations that we continue to monitor include the Energy Savings Opportunity Scheme, which requires us to complete energy audits every four years in the UK, and the European Commissions' guidelines on climate reporting. Since our sustainability strategy already includes operational efficiency and carbon reduction measures, we see these as more of an opportunity for Ferguson than a risk.
Market	Relevant, always included	The Group's operations are affected by various market considerations where we conduct business. The markets that Ferguson serves have different characteristics and as such certain market data is more relevant to specific end markets. For our residential market, the Leading Indicator of Remodelling Activity ("LIRA") provides a short-term outlook of national home improvement and repair spending to owner-occupied homes. It is designed to project the annual rate of change in spending for the current quarter and subsequent four quarters. The LIRA projections for the year ahead have weakened but still remain positive. In addition, existing single-family home sales is a good indicator of the strength of the housing market and tends to be a driver of remodelling spend. The seasonally adjusted annual rate of sales has remained at between 5.0-5.5 million throughout the last 12 months. US new residential construction data, released by the U.S. Census Bureau, provides data on the number of building permits and new housing starts. Building permits, a leading indicator, have averaged 1.3 million through 2018/19 whilst housing starts have averaged 1.2 million units. These measures have been broadly flat over the past couple of years. The American Institute of Architects ("AIA") Billings Index – Commercial/Industrial is a leading economic indicator of construction activity and is widely seen as reflecting prospective construction spending. Any score below 50 indicates a decline in business activity across the architecture profession, whereas an index score above 50 indicates growth. The index was above 50 during FY18. Ferguson is also monitoring the transition market risk associated with a shift in products demanded by consumers to ensure warming is limited below business as usual levels. The gas water heaters, HVAC units, and appliances that Ferguson markets and sells today might be replaced with alternatives in the future such as heat pumps, electric water heaters, and more efficient appliances. As climate change and warmer temperatures continue to impact water availability, we expect to see more consumer demand for water efficient products as well. While the production risk of these new products will be managed by our upstream manufacturing partners, Ferguson still needs to prepare associates to be able to market and sell these new types of products. Ferguson has begun tracking the proportion of sales that come from products with Sustainability certifications.
Reputation	Relevant, always included	Ferguson plc is exposed to reputational risk if the company is perceived as not effectively addressing issues regarding sustainability and climate change. Additionally, as Millennial and Generation Z individuals comprise more of our workforce and customer base , we may face higher expectations regarding the role of businesses in addressing climate change. While the Group is not engaged in a high regulated industry, it is subject to laws governing businesses generally, including laws related to land usage, the environment, and transportation. A breach of any legal or regulatory requirement could result in damage to the Company's reputation with our customers and wider stakeholders. One criteria for identifying Principal Risks is that they would 'seriously damage the Company's reputation for 12 months or more.' This risk is included in the Risk Management process, as Talent Management and Retention is included on our people-related focus areas in our 2019 Annual Account and Reports. We are committed to people development at every level of the organisation, and believe that having a strong sustainability reputation will help us attract and retain talent since associates are increasingly wanting to work for companies that align with their personal values.
Acute physical	Relevant, always included	Our Business Continuity planning includes response plans for the acute physical risks of climate change. Changes in the frequency and duration of extreme weather events could significantly impact our operations (for example, hurricanes, flooding, tornadoes and wildfires or other severe weather could cause our locations to be closed for an extended duration). We supply one million customers with over one million products carefully sourced from over 43,000 trade suppliers. Product availability is vitally important to our business so a highly efficient distribution network is key to delivering on our customers' needs. There are instances where changes in precipitation patterns could cause significant physical damage to property and stock held in our locations. Changes in precipitation patterns could also lead to interruptions to Ferguson plc's business operations by restricting our delivery service levels. Unusual weather patterns can also affect the wider supply chain, which can negatively affect the supply of inventory and other services to our business. Our physical locations are managed on a tiered basis, with the Tier I facilities scoring the highest importance. Resiliency strategies regarding these critical locations have been implemented by the Risk Management group and the Real Estate and Facilities team, including 24/7 emergency response, backup generators, and emergency contact systems. Our associates receive training and frequent updates from our Director of Security to ensure they are prepared to respond and recover as quickly as possible when faced with a natural disaster.
Chronic physical	Relevant, always included	Our company considers climate change in the overall risk evaluation process and examines the chronic physical impacts of climate change in our business continuity planning. We also take steps to proactively mitigate chronic physical risks when selecting a location for a new Ferguson- owned property, environmental assessments are performed by our Legal Real Estate group to ensure that no chronic physical environmental risks are present. If risks are identified, alternative locations are evaluated and assessed. Chronic physical risk caused by climate change in the form of rising sea levels and water temperatures is already affecting our operations. For example, rising temperatures increase the frequency and duration of business disrupting events such as wildfires and power outages, as seen Ferguson branches in California. Rising sea levels increase the frequency and duration of flooding. Ferguson associates commuting to Headquarters in Newport News, VA are dealing with increased nuisance flooding along their commutes.

C2.3

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

Yes

C2.3a

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

Identifier
Risk 1

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Acute physical	Increased severity and frequency of extreme weather events such as cyclones and floods

Primary potential financial impact
Decreased revenues due to reduced production capacity

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Severe weather events and catastrophic natural disasters present a risk to our physical locations and the customer markets we serve. These extreme weather events could result in the closure of a location for an extended period, due to tornadoes, hurricanes, floods or wildfires. While we make every effort to stay open for the communities we serve, safety is our first priority and it is our policy to close locations whenever working or traveling conditions would be unsafe for our associates. Risks from severe weather branch closings include having to cancel customer appointments (lost revenue), the risk of physical damage to a location and its inventory (covered by an insurance policy), along with having to divert shipments to alternate locations. Because Ferguson provides essential building materials, which are critical in helping communities repair and rebuild, it's extremely important that our customers be able to come to our counter locations, where trade professionals pick up the materials they need. Business continuity plans are in place to ensure minimal interruption to our locations and our distribution network. In the case of an expected severe weather event, Ferguson's Corporate Security team coordinates with impacted locations in advance, advising on site preparations and evacuations, if required. The company also has a disaster response team on call around the clock to ensure immediate response in an unexpected severe weather event. An example of a location impacted by a severe weather event was our blended branch in Tulsa, Oklahoma that was damaged by a tornado in 2017. First, our Corporate Security team, working with onsite Leadership verified that all associates were safe and accounted for, and our disaster recovery team arrived onsite shortly after. The associates assigned to the Tulsa location were assigned to alternative nearby branches while the disaster recovery efforts took place. We were able to recapture sales by communicating with our customers, and informing them that this location was temporarily closed and that alternative sites nearby could offer assistance immediately. Customers seeking to rebuild (whether residential, commercial, waterworks, HVAC, etc) were able to make purchases via phone, online or at nearby locations until we could safely re-open the location.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
6200000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
Ferguson has experienced branch closures on a short-term basis immediately before and after a natural disaster. While a branch closure could result in lost sales (varying greatly by geographic market and type of branch), by implementing our business continuity plans, we are able to divert customers to alternative physical locations or help them place orders online. In fiscal year 2019, Hurricane Florence caused an estimated $6.2M in lost revenue based on the following methodology: We took the exact days each branch was closed and then looked back at the same day the previous year to see what they typically sold that day. Then we multiplied that by the growth rate we had seen this year for that month prior to the closure. This was then rolled up across the business. Between September 11, 2018 and September 21, 2018, Ferguson had 139 close days due to Hurricane Florence across our business.

Cost of response to risk
260000

Description of response and explanation of cost calculation
The loss of an important branch or distribution center is naturally hedged by the diversified nature of our locations, customers and suppliers. The Group has documented and tested business continuity plans for its major distribution center and head office building where the risk is considered to be greatest. In conjunction with our insurers, eight of our highest value sites are audited each year to evaluate fire and other business continuity risks at a cost of $30,000 per year which is embedded in our premium. Ferguson purchases a comprehensive insurance program, covering property damage and business interruption risks. In the process of determining coverage amounts, our insurers review each site located in Ferguson's portfolio (like our headquarters location in Newport News, Virginia) for exposures to named windstorms, storm surge, earthquake, severe convective storm, and flood. Their modelling software is continually updated as new extreme weather events occur. At the local level, sites have begun pursuing resiliency adaptations such as purchasing generators to be prepared in the event of an electrical outage. This strategy ensures that we continue to remain open whenever possible, and capture sales, even in the case of a power outage. Our cost of management was calculated based on the $30,000 we pay to have eight sites (prioritized by highest value) audited each year to evaluate severe weather and other business continuity risks. Ferguson has also explored using analytics tools to map physical climate risk to our actual portfolio. 427's analysis projects climate risk in 5 categories: sea level rise, floods, heat stress, hurricanes, and water stress for specific addresses. This tool could help us choose long term locations with lower physical climate risk and understand where more resilience investments are required in our portfolio. To just monitor our critical sites, 427 offers a $20,000/year subscription for up to 100 assets. The audit of 8 highest value sites * $30,000 each + $20,000/year for top 100 sites = $260,000 per year

Comment

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Upstream

Risk type & Primary climate-related risk driver

Emerging regulation	Enhanced emissions-reporting obligations

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Ferguson imports over 75% of Own Brand products we sell from overseas through sea cargo shipments. As a distributor, we do not control the manufacturing of our goods, but we are responsible for integrating products which are manufactured overseas in to our distribution network. One short term risk we have identified which will impact our operating costs is the International Maritime Organization's new limit on sulphur content in fuel. This policy will cut the mass by mass percentage of sulfur content in ships' fuel oil from 3.50% m/m to 0.50% m/m (http://www.imo.org/en/MediaCentre/HotTopics/Pages/Sulphur-2020.aspx). There is a stricter limit of 0.10% m/m already in effect in four established emission control areas: the Baltic Sea area, the North Sea area, the North American area, and the United States Caribbean Sea area. The most relevant sea route for our operations is the trip from China to the United States via the Pacific Ocean, and most of this journey is not within an emission control area. Thus, we expect carriers to build in an additional fuel surcharge as a result of this regulation which would increase our operating costs. Assumptions: • Ferguson expected to ship 17,000 TEUs per year • Mainfreight, a global logistics provider, shared the upper and lower bounds of fuel surcharge which we will use in our estimation. https://www.mainfreight.com/global/en/news/transition-to-2020-low-sulphur-fuel-surcharge-lss.aspx • According to Mainfright, "Deep sea movement will obviously be higher than shorter sectors, but early indications are that it could range anywhere from USD50 – USD300/TEU." • Rolf Habben Jansen, CEO of Hapag-Lloyd, estimated that using low-sulphur fuel would add about $100 per TEU of additional cost. https://www.joc.com/maritime-news/container-lines/hapag-lloyd-ceo-low-sulfur-baf-should-be-simple-transparent_20190307.html This figure corroborates the range of impact from our above source.

Time horizon
Short-term

Likelihood
Virtually certain

Magnitude of impact
Low

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)
850000

Potential financial impact figure – maximum (currency)
5100000

Explanation of financial impact figure
The minimum potential financial impact figure was calculated by multiplying the twenty foot equivalent unit (TEUs) shipped by Ferguson over a one year period, estimated an additional cost of $50 per TEU. The maximum potential financial impact figure was calculated by multiplying the TEUs shipped by Ferguson over a one year period, estimated an additional cost of $300 per TEU.

Cost of response to risk
0

Description of response and explanation of cost calculation
Given the situation that we expect shipping carriers to be impacted by this additional cost due to a switch in low-sulphur fuel, we have undertaken the task of diversifying our ocean carriers. While there was previously only one ocean carrier utilized by Ferguson, our Supply Chain team took action by conducting an RFP to assure that the business has three or more ocean shipping partners in place. The result of the RFP will be substantial costs reductions, and the ability to assure redundancy within our shipping portfolio. Given that we expect our Own Brand volume to increase over the next five years, this initiative was key to ensuring that we minimize our overall cost per TEU. Both our Supply Chain and Strategic Sourcing teams were integral to achieving this result. We expect the cost of management to be zero because Ferguson already staffs a Strategic Sourcing Team, which is conducting the RFP on behalf of the Sourcing Team. Because these individuals are Certified Professionals in Supply Chain Management (CPSM) by the Institute of Supply Management, they are skilled negotiators and we anticipate that the savings realized through the contracts they negotiate will far exceed the investment of time to conduct the RFP.

Comment

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Other, please specify (Fuel efficiency standards)

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Ferguson employs a substantial owned/leased fleet for final mile deliveries and emissions from owned/leased transportation make up around 30% of our overall reported emissions. Ferguson's fleet is comprised of nearly 10,000 assets, including Class 1-8 commercial trucks, and trailers. We do not have the capability to quickly upgrade or switch out fleet without substantially impacting business operations. Thus, Ferguson is at risk of regulatory requirements which would mandate us to track and improve our fleet's fuel efficiency. In the United States, such regulations have been passed before. The primary example being the EPA and NHTSA's Heavy-Duty National Program, a program to reduce greenhouse gas emissions and improve fuel efficiency of heavy-duty trucks and buses which went into effect on November 14, 2011 (https://www.epa.gov/regulations-emissions-vehicles-and-engines/final-rule-phase-1-greenhouse-gas-emissions-standards-and). Phase 2 of the regulation was effective on December 27, 2016 (https://www.govinfo.gov/content/pkg/FR-2016-10-25/pdf/2016-21203.pdf). While the US makes up most of our market share, we still operate fleet in Europe which is susceptible to similar regulations. On February 19, 2019, representatives of the European Commission, the European Parliament, and the European Council agreed on a compromise for setting carbon dioxide (CO2) emission standards for new heavy-duty vehicles (HDVs) for the first time in the European Union. The targets will reduce the average CO2 emissions from the highest-emitting HDV segments by 15% in 2025 and by 30% in 2030, both relative to a baseline determined from 2019 and 2020 data (https://theicct.org/sites/default/files/publications/CO2%20HDV%20EU%20Policy%20Update%202019_04_17.pdf). While business disruption from these policies is minimal since most of the burden is placed on manufacturers to increase fuel economy, a future regulation targeting existing fleet could have a financial impact. The increased price of new tractors/trailers is the primary initial financial risk to Ferguson; however, a fuel efficiency regulation is expected to reduce the total cost of ownership of a truck when fuel costs over time are taken in to account. For the purposes of this exercise, Ferguson assumed that emissions regulations impacted the US business and fleet only (as the largest operating company).

Time horizon
Medium-term

Likelihood
About as likely as not

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
9000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The Final Rule for Greenhouse Gas Emissions and Fuel Efficiency Standards for Medium- and Heavy-Duty Engines and Vehicles – Phase 2 includes a "Summary for the Phase 2 Medium- and Heavy-Duty Vehicle Program Expected Per-vehicle Fuel Savings, GHG Emission Reductions, and Cost for Key Vehicles Categories" on page 73482 of (https://www.govinfo.gov/content/pkg/FR-2016-10-25/pdf/2016-21203.pdf) or page 5 in the pdf. This estimate covers our US fleet only. Using the lower bound of per vehicle cost increase for manufacture year 2021, our active fleet was allocated to these categories based on vehicle class. Classes 2 and 3 were designated as pickups/vans, Classes 4, 5, and 6 were designated as vocational vehicles, and Classes 7 and 8 needed a trailer and tractor replacement. Based on this analysis, we expect that Ferguson would incur $11m to upgrade to vehicles with higher fuel efficiency over a five-year period. We calculated a financial impact using a MY2021 price increase multiplied by the number of vehicles we expect to replace over a 5 year period for each vehicle category. 1200 pickups/vans upgraded * $500/upgrade + 1000 vocational vehicles upgraded * $1000/upgrade + 1000 tractors * $6500 each and 1000 trailers at $900 each = $9,000,000

Cost of response to risk
1700000

Description of response and explanation of cost calculation
Situation: Ferguson's owned/leased fleet in the US is a major contributor to our operating costs and carbon emissions. There is a good business case for increasing fuel efficiency of our fleet. Regulations which require fuel efficiency improvements from manufacturers could increase the cost to purchase these vehicles in the short run, but may result in a net benefit over time. Task: The increasing trend in fuel efficiency over time as technology advances leaves many leased vehicles outdated. Action: Ferguson maintains internal vehicle retention guidelines to ensure that our leased fleet utilizes up-to-date technology and retires older, less efficient vehicles. Tractors are replaced every 96 months, trailers are replaced every 120 months, vocational vehicles are replaced every 84 months, and pickups/vans are replaced every 60 months. Result: We reduced diesel fuel usage in owned/leased vehicles from 8.5m gallons in FY17 to around 8m gallons in FY18. Since vehicles replacements are staggered, the estimated financial impact figure would be felt over a five year period. Additionally, the increased fuel economy of the vehicles would favourably reduce fuel costs throughout the company. Ferguson is managing this risk in the US business by hiring a new fleet manager and adopting a new transportation management system (TMS). We calculated this estimate by adding together the estimated cost of subscription fees for the new TMS and the estimated salary for the new fleet manager. Over three years the estimated cost is approximately $1.7m.

Comment

C2.4

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

C2.4a

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

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Markets

Primary climate-related opportunity driver
Access to new markets

Primary potential financial impact
Increased revenues through access to new and emerging markets

Company-specific description
The United States Fourth National Climate Assessment (Volume II) identifies infrastructure as one of the long-term risks in its summary findings. "Our Nation's aging and deteriorating infrastructure is further stressed by increases in heavy precipitation events, coastal flooding, heat, wildfires, and other extreme events, as well as changes to average precipitation and temperature. Without adaptation, climate change will continue to degrade infrastructure performance over the rest of the century, with the potential for cascading impacts that threaten our economy, national security, essential services, and health and well-being. Infrastructure currently designed for historical climate conditions is more vulnerable to future weather extremes and climate change." As one of the nation's largest waterworks companies, Ferguson Waterworks is in a position to anticipate this growth in demand for infrastructure designed for future climate conditions and position as a leader in this developing market. Ferguson Waterworks operates across the water, sanitary sewer, and stormwater management industries and has experience working with: public and private water sewer authorities, utility contractors, public works/line contractors, and heavy highway contractors. The products our Waterworks business offers range from geotextiles and soil stabilization to meter automation and pipes, valves and fittings. Ferguson Waterworks bids to provide project management and equipment on new water infrastructure projects that will become more necessary as climate change increases chronic strain on existing water infrastructure.

Time horizon
Long-term

Likelihood
Unlikely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
1000000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
EPA's 6th Drinking Water Infrastructure Needs Survey and Assessment shows significant investment is needed to maintain and improve the nation's drinking water infrastructure. The financial impact figure represents Ferguson's annual revenue opportunity, which the report characterizes as being relevant for 20 years. https://www.epa.gov/sites/production/files/2018-10/documents/corrected_sixth_drinking_water_infrastructure_needs_survey_and_assessment.pdf The estimate covers infrastructure needs that are eligible for (but not necessarily financed by) the DWSRF (Drinking Water State Revolving Fund), including the installation of new drinking water infrastructure and the rehabilitation, expansion, or replacement of existing infrastructure. The EPA's cost estimate of $465 billion reflects comprehensive construction costs including engineering and design, purchase of raw materials and equipment, construction and installation labor, and final inspection. Ferguson estimates that 40% of this cost is spent on engineering and design + purchase of equipment, which are the areas that we can provide value in. This leaves the relevant market at 40% * $465b = $186b. With our market share of 22%, $186b * 22% = $40b over next 20 years. If only have of projects are funded over the next 20 years, the opportunity is $40b * .5 = $20b over the next 20 years, which averages to $1b in per year.

Cost to realize opportunity
2250000

Strategy to realize opportunity and explanation of cost calculation
Ferguson Waterworks operates within all 4 market categories (distribution and transmission, treatment, storage, and source), so the majority of the opportunity from the EPA assessment would be relevant to our business. The EPA estimate includes spend on: • Engineering and design • Purchase of raw material • Purchase of equipment • Construction and installation labor • Final inspection Ferguson Waterworks is not involved with construction and installation labor and final inspection, but does contribute to the engineering and design, purchase of raw material, and purchase of equipment. We believe these tasks to represent 20% of the overall market opportunity, but every project we do is different, so it is difficult to break down overall project costs for these sub-tasks. While we do contribute to engineering and design for clients, we only bring in revenue from purchase of raw material and equipment. Situation: US Drinking Water Infrastructure requires additional funding to address the climate-related stressors on the systems. Therefore, national funding is set aside to upgrade water and stormwater infrastructure and protect water quality. Task: Municipalities reach out to Ferguson for advice, following being selected as a recipient of additional water infrastructure funding. Ferguson pairs infrastructure investment opportunities with improved piping and water technology to improve leak detection capabilities. Action: Ferguson advises municipalities on their water infrastructure concerns, advising on product and technologies that can help improve water quality. Result: Ferguson experiences increase in sales, while more Americans receive access to safe drinking water. Now, extrapolating Ferguson's 22% market share, this revenue opportunity should be $20b over the next 20 years, or $1b a year. As a baseline, according to Ferguson plc's 2018 Annual Report and Accounts, the Civil/Infrastructure market contributed 7% of our 2018 U.S. revenue, or $1.16b. We calculated the cost to realize the opportunity on an annual basis, including advertising, marketing and partnership efforts that Ferguson would need to expand to fully realize this opportunity in the Waterworks business.

Comment

Identifier
Opp2

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Products and services

Primary climate-related opportunity driver
Development and/or expansion of low emission goods and services

Primary potential financial impact
Increased revenues resulting from increased demand for products and services

Company-specific description
On water, the U.S. 4th National Climate Assessment states: "Rising air and water temperatures and changes in precipitation are intensifying droughts, increasing heavy downpours, reducing snowpack, and causing declines in surface water quality, with varying impacts across regions. Future warming will add to the stress on water supplies and adversely impact the availability of water in parts of the United States. Water management strategies that account for changing climate conditions can help reduce present and future risks to water security, but implementation of such practices remains limited." As water stress grows, we expect to see: a shift in demand towards water efficient products and a corresponding rise in mandatory green building standards like CalGreen (Title 24, Part 11, of the California Code of Regulations) and the California Energy Commission's Building Energy Efficiency Standards (Title 24, Part 6 of the California Code of Regulations). The Building Energy Efficiency Standards contain water efficiency requirements for newly constructed buildings, additions to existing buildings, and alterations to existing buildings. CalGreen includes requirements that define the maximum allowable flow rates for plumbing fixtures and fittings. An internal analysis of our sales for WaterSense products versus non-WaterSense products from 2015 to 2018 confirms this trend and demonstrates our ability to capture this market. Across the key categories of: Residential Toilets, Commercial Toilets, Bathroom Sink Faucets, Bathtub & Shower Faucets, Shower Faucets, and Hand Showers, we saw over a 30% increase in revenue from WaterSense products while revenue from non-WaterSense products decreased by 2% across the same time period at physical locations. Our position as one of the largest distributors of plumbing supplies allows us to rely on our manufacturer and supplier partners to develop and certify these water efficient products. As a result, Ferguson can benefit from increased demand for sustainable products.

Time horizon
Medium-term

Likelihood
About as likely as not

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Please select

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
We have a wide variety of products that are WaterSense certified, and sales in these categories have increased an average of 11% a year. Assuming this increase in sales continues at the current pace, Ferguson expects our four year market opportunity to be approximately $900m.

Cost to realize opportunity
15000000

Strategy to realize opportunity and explanation of cost calculation
Situation: As the market for WaterSense products continues to grow, investment will be required to realize this opportunity. While Ferguson can use manufacturer co-op funding to effectively market branded products that meet this criteria, Ferguson Own Brand products will require third party certification and advertising to capitalize on this market. Task: EPA requires all products bearing the WaterSense label to be independently certified. Manufacturers and other applicants are responsible for costs associated with WaterSense certification, including testing and inspections. The costs to obtain a WaterSense certification may vary significantly depending on the product, service, or type of home seeking certification. If we urge our manufacturers to pursue more certifications, they will likely pass these costs on to us. Action: Ferguson will need to partner with manufacturers for Own Brand products to include these criteria in product specification. Ferguson will also need to develop an advertising budget and media spend plan in order to target the customers in this market, who may not be a part of our existing customer base. Result: The result of these efforts will be the opportunity to realize additional revenue, and this should translate to additional profit for the business in these key categories. We calculated the cost to realize this opportunity by estimating the additional investment required for product certification and customer-facing advertising.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Use of more efficient production and distribution processes

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
Ferguson is continuing to optimize its distribution process by opening import centers in the United States. Currently, our products are shipped to the central US before being sent on to other distribution centers or local branches for sale. Our goal is to shift the supply chain out of the central US to new import centers so shippers would deliver to these import centers on the coasts rather than to Distribution Centers. We predict this new system to require less touchpoints/labor and save on overall transportation costs. However, the biggest opportunity we have not quantified yet could be on inventory. We would not need to send full containers to a distribution center that doesn't need them anymore and would be able to stock more relevant products at our distribution centers and thus not have to buy as much. Transportation savings would help reduce our carbon footprint since outsourced transit and fleet fuel usage contribute to over 40% of reported emissions.

Time horizon
Long-term

Likelihood
About as likely as not

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
3000000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
We performed an internal analysis to create this estimate. Our calculations included cost of goods sold, internal ocean-rail savings, drayage, distribution center transfers, detention savings, operational costs savings and external storage savings. Ferguson has quantified this opportunity as $3 million over the next four years, but the increased inventory efficiency mentioned above which is still unquantified may offer the largest opportunity for savings.

Cost to realize opportunity
0

Strategy to realize opportunity and explanation of cost calculation
Due to capacity constraints at existing DCs, import centers are currently being opened on both coasts. Therefore, no additional investment is needed to realize this opportunity, so we have calculated this as zero. To realize this opportunity, Ferguson elected to change shipping processes, receiving product (whether bathtubs, faucets, or other products) at the coastal import centers, before warehousing and/or transferring to the appropriate distribution center to meet inventory level requirements. The result is that Ferguson achieved a transportation savings and carbon savings from importing the product directly to the new import centers.

Comment

C3. Business Strategy

C3.1

(C3.1) Have climate-related risks and opportunities influenced your organization's strategy and/or financial planning?
Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform its strategy?
Yes, qualitative and quantitative

C3.1b

(C3.1b) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenarios and models applied	Details
DDPP RCP 2.6 RCP 8.5	i. Ferguson's scenario analysis considers a 2 degrees C scenario and a 4 degrees C scenario, which were chosen to contrast the substantial shifts needed to reach a 2 degree C scenario, as opposed to a business as usual scenario. Our analysis approach included tools from multiple scenarios including DDPP, RCP 2.6 and RCP 8.5. We considered the transition risks (policy and legal, technology, market, reputation) for each scenario, along with the impact quantification, timeline and potential result for Ferguson. Additionally, we analyzed the physical risks (both acute and chronic), quantifying the impact, timeline and potential results for Ferguson. We also considered the opportunities to Ferguson in each scenario. We expected a market opportunity due to access to new investment markets, and increased revenue opportunities for products and services. We included impact quantification, timeline and potential result for each of these opportunities as well. The scenario analysis covered a timeline through 2050, with the majority of the risks and opportunities being experienced by Ferguson in less than 20 years. Subject matter experts from across the business were involved in the scenario analysis, including supply chain, business analytics, procurement, marketing, category management, finance, legal, communications, public relations and investor relations. The results of the scenario analysis showed risks in a 2 degree C scenario that would necessitate additional investment in sustainability initiatives if policy changes mandate corporate emissions reductions. Additionally, scenario analysis showed that we could be vulnerable to market shifts if consumers seek out products with lifecycle analysis and environmental product declarations. We identified that we could mitigate this risk by incorporating more products from the vendors that we carry and ensuring Ferguson is supporting policies that will help achieve a 2 degree C scenario. ii. The results of scenario analysis helped clarify the risks and opportunities that Ferguson could face in a business as usual scenario. Moving forward, the results of the scenario analysis will inform our business objectives and strategy by supporting policies and initiatives that will help achieve a 2 degree C scenario. The stakeholder interview process was a very valuable part of scenario analysis for Ferguson. The results of the scenario analysis were reviewed with our C-suite prior to receiving review by the Board of Directors and being publicly disclosed as part of the FY19 Annual Report of Account. We found that our strategy for incorporating energy efficiency in our operations was very beneficial in a 2 degree C scenario, and therefore any reductions that we are able to achieve proactively would not only drive operational efficiency but also better prepare us for possible mandates to reduce corporate carbon emissions. Ultimately, scenario analysis has provided additional support to the business case for projects and additional business buy-in. This added support has led to the approval of projects including lighting retrofits, HVAC upgrades and supported the purchase of green energy. iii. A specific case study where scenario analysis has informed our business strategy is online sustainable product training. After reviewing the results of scenario analysis, Ferguson identified an opportunity to provide further associate training on sustainable products in order to meet changing customer expectations and anticipated market demands. The business developed a company-wide required training on sustainable products, and incorporated sustainable product marketing into our marketing plans that define the business strategy and our vendor engagement strategy. To learn even more from scenario analysis, Ferguson intends to disclose to a 1.5 degree C scenario in our FY20 Annual Report of Accounts. Scenario analysis will also inform our future goals for sustainability.

C3.1d

(C3.1d) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Climate-related risks and opportunities have influenced our strategy for products and services. For example, Ferguson identified an opportunity to provide further associate training on sustainable products in order to meet changing customer expectations and anticipated market demands. The business developed a company-wide required training on sustainable products, and incorporated sustainable product marketing into our marketing plans that define the business strategy and our vendor engagement strategy. Specifically, Ferguson is focused on improving offerings of products with Water Sense and Energy Star certification, as sustainable product certification may become a primary screening criteria for consumers interested in higher energy efficiency. Therefore, our strategy for Ferguson branded products targets Water Sense as a minimum design standard for faucets and toilets and Energy Star where applicable to the category. The proportion of sales in sustainable products is now a metric that is monitored by the business on an ongoing basis. Monitoring this metric will allow us to react effectively to product trends and shape future marketing efforts and associate training to demonstrate leadership in the Sustainability space. Ferguson has the potential to influence many consumers at the point of sale to purchase products that will reduce their emissions impact.
Supply chain and/or value chain	Yes	Ferguson will need to engage more with our supply chain and value chain to accurately assess our Scope 3 emissions and mitigate them. Therefore, internal discussions have begun regarding considering supplier management of climate risks to reduce risk to business continuity. The business is transitioning to a new supplier management platform, which will allow greater visibility to supplier progress in this area. This transition is scheduled for FY21.
Investment in R&D	Yes	Recognizing water resource management risks, our Waterworks business has collaborated with Mueller Systems to advance intelligent water metering and monitoring. Specifically, this smart metering technology will be used to provide data insights into water utilities' distribution systems, resulting in leak detection, pressure monitoring and enhanced water quality. This partnership is starting in 2020. Smarter water infrastructure technologies will be needed to better manage water as a resource in the context of a world with more water stress due to climate change. https://www.wateronline.com/doc/mueller-and-ferguson-waterworks-announce-largest-deployment-of-remote-disconnect-meters-in-the-u-s-0001
Operations	Yes	Climate-related risks and opportunities have influenced our strategy for our operations. Ferguson identified the need for sustainable investment strategies by incorporating energy efficiency strategies in our own buildings- for example, our new headquarters building is pursuing Green Globes green building certification. The building is planned to be Green Globes verified in the fall of 2020. Fleet opportunities are also being investigated by our Fleet Management team as part of our business strategy. Another area of our operations where climate-related risks and opportunities were considered were the California Public Safety Power Shutoffs (PSPS), implemented by the California Public Utilities Commission in an effort to mitigate wildfire risk. Due to the risk of branch or distribution center power outages, the business discussed resiliency strategies including the purchase of generators.

C3.1e

(C3.1e) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Capital expenditures Access to capital	Climate-related risks and opportunities have influenced Ferguson's financial planning in the following ways: - tracking sustainable product revenues (compared year over year) - potential access to new markets (refreshed annually) -tracking lost revenue due to climate-related weather events (compared year over year) -integrating sustainability considerations into capital expenditures (began integrating in 2018) -improved access to capital (have experienced over the past two years due to AAA MSCI rating). An example specific to Ferguson's financial planning is that we would experience improved access to capital from investors as a result of issuing a green bond or a sustainability-linked bond. This opportunity has influenced our financial planning looking ahead- we expect to further explore this opportunity within the next two years.

C3.1f

(C3.1f) Provide any additional information on how climate-related risks and opportunities have influenced your strategy and financial planning (optional).

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

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

Target reference number
Int 1

Year target was set
2016

Target coverage
Company-wide

Scope(s) (or Scope 3 category)
Scope 1+2 (location-based) +3 (downstream)

Intensity metric
Other, please specify (Metric tons CO2e per million dollars USD)

Base year
2016

Intensity figure in base year (metric tons CO2e per unit of activity)
23.3

% of total base year emissions in selected Scope(s) (or Scope 3 category) covered by this intensity figure
100

Target year
2021

Targeted reduction from base year (%)
10

Intensity figure in target year (metric tons CO2e per unit of activity) [auto-calculated]
20.97

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year (metric tons CO2e per unit of activity)
20.4

% of target achieved [auto-calculated]
124.463519313305

Target status in reporting year
Underway

Is this a science-based target?
No, but we anticipate setting one in the next 2 years

Please explain (including target coverage)
Ferguson plc set a five-year target (from August 1, 2016 to July 31, 2021) to reduce carbon by 10 percent per $m revenue. The time period for this goal was set to align with Ferguson plc's financial year. Performance at the end of 2017/2018, two years into the target period, was positive. There was a 9% improvement and this was achieved by each business setting its own targets for carbon to support the achievement of the Group goals. The value for the normalized based year emissions is given in metric tonnes of CO2e per million US dollars. The target includes Scope 3 emissions that are within Ferguson plc's reporting boundary: outsourced road-based transport and air/rail travel.

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
No other climate-related targets

C4.3

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

C4.3a

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

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	3	5731.6
To be implemented*	1	2.4
Implementation commenced*	0	0
Implemented*	2	2089
Not to be implemented	0	0

C4.3b

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

Initiative category & Initiative type

Transportation	Other, please specify (Network Optimization)

Estimated annual CO2e savings (metric tonnes CO2e)
2049

Scope(s)
Scope 3

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
3000000

Investment required (unit currency – as specified in C0.4)
0

Payback period
<1 year

Estimated lifetime of the initiative
16-20 years

Comment
Through a network optimization project that shifted the supply chain out of the central US to two new import centers, Ferguson saved substantial emissions through avoided transportation. Now, shippers deliver product to these import centers on the coasts, rather than to Distribution Centers that are more centrally located. These transportation savings reduced our carbon footprint since outsourced transit and fleet fuel usage contribute to over 40% of reported emissions. This project is expected to yield over $3M net savings over 4 years, based on internal analysis on savings from: cost of goods sold, internal ocean-rail savings, drayage, distribution center transfers, detention savings, operational expenditure impact, labor savings at former import center, external storage savings and miscellaneous operational cost savings.

Initiative category & Initiative type

Energy efficiency in production processes	Electrification

Estimated annual CO2e savings (metric tonnes CO2e)
40

Scope(s)
Scope 1

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
32000

Investment required (unit currency – as specified in C0.4)
158000

Payback period
4-10 years

Estimated lifetime of the initiative
6-10 years

Comment

C4.3c

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

Method	Comment
Compliance with regulatory requirements/standards	In order to comply with regulations, investment is required for the maintenance of building appliances and company vehicles (both commercial fleet and company cars) which in turn is being increasingly viewed as opportunity to install products or update assets to achieve both environmental goals and operations efficiencies.
Financial optimization calculations	The primary driver of investment in emissions reduction activities is the financial business case. These include ROI and IRR.
Employee engagement	The Group and business unit environmental performance team works with the businesses to raise awareness of the cost-saving initiatives that will support the environmental targets. Additionally, associate engagement takes place through integrating sustainability into our internal communications plan for the year.
Internal incentives/recognition programs	A number of employees at Ferguson plc and the individual business units are incentivised to deliver against environmental targets. This promotes the development of business cases to secure investment in emissions reduction activities.
Internal finance mechanisms	Members of the Environmental performance team are also included in Finance Committee notifications so that they can review the proposed capital expenditure and propose improvements to the project that would lower the carbon footprint.
Employee engagement	A Sustainability Champions Team was formed to encourage associate engagement on environmental issues including climate change. We created a platform for like-minded associates throughout the business to share ideas and best practices.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation
Product

Description of product/Group of products
Our HVAC business provided comprehensive product design and installation consultation to Mechanical Solutions LLC (based in Richmond, Virginia) for a highly specialised job. The requirements were to provide heating and cooling for a building originally constructed in 1828. The owners of the old hospital chose to renovate the former administration office and turn it into a boutique hotel, The Blackburn Inn. Included in that renovation was the need for a quiet, efficient HVAC system. It was agreed a Variable Refrigerant Flow ("VRF") system was the best solution and Ferguson HVAC's VRF division, which consists of engineers and factory trained certified product specialists, partnered with Mechanical Solutions to deliver a VRF system that met their requirements, including maintaining the historic integrity of the building. Because Ferguson HVAC has a dedicated VRF team, associates were involved from the initial design phase through delivery and installation, conducting several site visits and walkthroughs to ensure Mechanical Solution's success. Ferguson provided equipment and ancillary products, including 70 indoor units, to keep the common areas and 49 hotel rooms comfortable. This new HVAC system reduced emissions associated with heating and cooling the old building.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Estimating and Reporting the Comparative Emissions Impacts of Products (WRI)

% revenue from low carbon product(s) in the reporting year
10

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment
Over ten percent of revenue came from sustainable products.

Level of aggregation
Group of products

Description of product/Group of products
Ferguson US offers a range of products that decrease a customer's carbon footprint, including programmable thermostats, high efficiency HVAC products, and high efficiency lighting.

Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions

Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Green Bond Principles (ICMA)

% revenue from low carbon product(s) in the reporting year
10

% of total portfolio value
<Not Applicable>

Asset classes/ product types
<Not Applicable>

Comment
We are working on internal reporting to quantify the carbon reduction achieved through these products.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start
August 1 2015

Base year end
July 31 2016

Base year emissions (metric tons CO2e)
173191

Comment

Scope 2 (location-based)

Base year start
August 1 2015

Base year end
July 31 2016

Base year emissions (metric tons CO2e)
126981

Comment

Scope 2 (market-based)

Base year start
August 1 2015

Base year end
July 31 2016

Base year emissions (metric tons CO2e)
0

Comment
N/A. We do not currently report using market-based emissions factors.

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.
Defra Voluntary 2017 Reporting Guidelines
IEA CO2 Emissions from Fuel Combustion
IPCC Guidelines for National Greenhouse Gas Inventories, 2006
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

C6. Emissions data

C6.1

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

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
182117

Start date
<Not Applicable>

End date
<Not Applicable>

Comment

C6.2

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

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We are reporting a Scope 2, market-based figure

Comment
We are reporting Scope 2 market-based figures for UK.

C6.3

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

Reporting year

Scope 2, location-based
100345

Scope 2, market-based (if applicable)
97882

Start date
<Not Applicable>

End date
<Not Applicable>

Comment
Approximately 10,000,000 kWh UK electricity sourced from green sources.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

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

Purchased goods and services

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
This category is not material in comparison to the products that we sell.

Capital goods

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
This category is not material in comparison to the products that we sell.

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

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
We do not have fuel and energy related activities outside of Scope 1 and 2.

Upstream transportation and distribution

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Work is ongoing to communicate with upstream supply chain partners to capture this info.

Waste generated in operations

Evaluation status
Not relevant, calculated

Metric tonnes CO2e
0

Emissions calculation methodology
EPA WARM Model v15 helps calculate emissions from waste management: https://www.epa.gov/warm/versions-waste-reduction-model-warm#15 17,915 tons of recycled corrugated containers saves 3.14 tCO2e per ton. 52,487 tons of mixed MSW emits .36 tCO2e per ton. Approximating all reported recycling tons as corrugated containers and approximating all landfilled waste as mixed MSW. Net impact of -37,419 tCO2e, but landfilling has an impact of +18,750tCO2e which is <5% of Ferguson's emissions footprint

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain
Waste volumes provided by national waste broker

Business travel

Evaluation status
Relevant, calculated

Metric tonnes CO2e

Emissions calculation methodology

Percentage of emissions calculated using data obtained from suppliers or value chain partners
100

Please explain

Employee commuting

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Upstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Ferguson's reporting boundary includes the emissions from leased assets in Scope 1 and 2.

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Metric tonnes CO2e

Emissions calculation methodology

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

Please explain

Processing of sold products

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
The majority of products that Ferguson sells are finished.

Use of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
There are ongoing efforts to calculate the environmental impacts of the products that Ferguson sells such as appliances and water heaters.

End of life treatment of sold products

Evaluation status
Relevant, not yet calculated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Ferguson is looking for ways to quantify these emissions.

Downstream leased assets

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Ferguson does not have downstream leased assets.

Franchises

Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Ferguson has no franchises.

Investments

Evaluation status
Not evaluated

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain
Ferguson is prioritizing the analysis of impact of products and the end of life treatment of these products.

Other (upstream)

Evaluation status

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Metric tonnes CO2e
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?
No

C6.10

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

Intensity figure
12.8

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
279998

Metric denominator
Other, please specify (million dollars USD revenue)

Metric denominator: Unit total
21847.57

Scope 2 figure used
Market-based

% change from previous year
8

Direction of change
Decreased

Reason for change
The UK business opted for an emissions reduction activity of sourcing more green energy in the UK. Following this action, scope 2 emissions were reduced due to the increased sourcing of green energy in the UK

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
No

C7.2

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

Country/Region	Scope 1 emissions (metric tons CO2e)
United States of America	152932
United Kingdom of Great Britain and Northern Ireland	17732
Canada	11440

C7.3

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

C7.3a

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

Business division	Scope 1 emissions (metric ton CO2e)
Ferguson	152932
Wolseley UK	17732
Wolseley Canada	11440

C7.3c

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

Activity	Scope 1 emissions (metric tons CO2e)
Natural gas	47109
Forklift - Liquefied Propane	8077
Forklift - Diesel	1123
Forklift - Gas	34
Goods Transport - Diesel	97170
Goods Transport - Gas	16024
People Transport - Diesel	3284
People Transport - Gas	4760
Refrigerant Leakage	4407

C7.5

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

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted for in Scope 2 market-based approach (MWh)
United States of America	90942		216066	
United Kingdom of Great Britain and Northern Ireland	5969	3506	14239	10004
Canada	3396		23167	

C7.6

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

By business division
By activity

C7.6a

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

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Ferguson	90942	
Wolseley UK	5969	3505.8
Wolseley Canada	3396	

C7.6c

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

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Electricity Use	100345	97882

C7.9

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

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption	2463	Decreased	0.87	More renewable energy used in UK. Prev year scope 1 + 2 = 175,564 + 107,352 2463/(175564+107352)*100% =
Other emissions reduction activities		<Not Applicable>		
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

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

Market-based

C8. Energy

C8.1

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

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

C8.2

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

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

C8.2a

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

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	Unable to confirm heating value		238449	238449
Consumption of purchased or acquired electricity	<Not Applicable>	10004	253474	263479
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	10004	491924	501928

C8.2b

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

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Fuels (excluding feedstocks)
Natural Gas

Heating value
Unable to confirm heating value

Total fuel MWh consumed by the organization
238449

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Emission factor
1.88496

Unit
kg CO2 per m3

Emissions factor source
GHG Protocol Emission Factors from Cross Sector Tools March 2017 Table 1. CO2 emission factors by Fuel

Comment

C8.2e

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

Sourcing method
Unbundled energy attribute certificates, Guarantees of Origin

Low-carbon technology type
Wind

Country/region of consumption of low-carbon electricity, heat, steam or cooling
United Kingdom of Great Britain and Northern Ireland

MWh consumed accounted for at a zero emission factor
10004

Comment
Provided by wind, solar, and hydro

C9. Additional metrics

C9.1

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

C10. Verification

C10.1

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

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

C10.1a

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

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
ERM CVS 2019 Report Assurance Statement Ferguson_Final (1).pdf

Page/ section reference
Page 1

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1b

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

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
ERM CVS 2019 Report Assurance Statement Ferguson_Final (1).pdf

Page/ section reference
Page 1

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

C10.1c

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

Scope 3 category
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
ERM CVS 2019 Report Assurance Statement Ferguson_Final (1).pdf

Page/section reference
Page 1

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)
100

Scope 3 category
Scope 3: Purchased goods and services

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Limited assurance

Attach the statement
ERM CVS 2019 Report Assurance Statement Ferguson_Final (1).pdf

Page/section reference
Page 1

Relevant standard
ISAE3000

Proportion of reported emissions verified (%)

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, but we are actively considering verifying within the next two years

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
No, and we do not anticipate being regulated in the next three years

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

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

Yes, our suppliers
Yes, our customers

C12.1a

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

Type of engagement
Information collection (understanding supplier behavior)

Details of engagement
Other, please specify (We expect all of our suppliers to comply with the Ferguson Code of Conduct, which includes environmental criteria.)

% of suppliers by number
100

% total procurement spend (direct and indirect)
100

% of supplier-related Scope 3 emissions as reported in C6.5
0

Rationale for the coverage of your engagement
Our suppliers are a key link in the value chain for sustainable products. We are still in the early stages of supplier engagement, but have prioritized working with our largest suppliers, as they have the most material impact on our business and our emissions.

Impact of engagement, including measures of success
The success of our engagement was measured by the high level of supplier participation.

Comment

C12.1b

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

Type of engagement
Education/information sharing

Details of engagement
Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number
100

% of customer - related Scope 3 emissions as reported in C6.5
0

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
Ferguson shares information about our Sustainability Program and our performance with our customers through our sustainability program update, which links our carbon reduction efforts to the products that we sell. We highlight links between our program and related Sustainable Development Goals, and provide our contact information for customers looking to learn more about our products and performance. Our Sales Team members use this information to help communicate our efforts to prospective customers, as well.

Impact of engagement, including measures of success
We measure engagement through customer inquiries, the number of internal downloads and the revenue from sustainable products, which is tracked year over year.

Type of engagement
Education/information sharing

Details of engagement
Share information about your products and relevant certification schemes (i.e. Energy STAR)

% of customers by number
100

% of customer - related Scope 3 emissions as reported in C6.5
0

Portfolio coverage (total or outstanding)
<Not Applicable>

Please explain the rationale for selecting this group of customers and scope of engagement
We provide product- specific information to all customers on sustainable product certifications, such as Energy Star and Water Sense. Additionally, we convey rebate information offered by local utilities to incentivize the purchase of sustainable products. For example, on Build.com, customers can search "rebates" and receive a list of all local rebates available for products meeting Energy Star or Water Sense criteria specified by their locality.

Impact of engagement, including measures of success
We track the amount of interactions that customers have with this feature of our website through our vendor, which provides an aggregated report to our business on a monthly basis. Additionally, Ferguson monitors sustainable product sales, year over year.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?
Trade associations

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?
Yes

C12.3c

(C12.3c) Enter the details of those trade associations that are likely to take a position on climate change legislation.

Trade association
HHIC (Heating and Hotwater Industry Council) (Wolseley UK)

Is your position on climate change consistent with theirs?
Consistent

Please explain the trade association's position
THe HHIC are actively tackling all the challenges that the Zero Carbon targets have provided to industry. They currently have a very active campaign to influence the UK Government on how best to meet the 2020 and 2050 targets including the establishment of an industry/government policy on 'Heat in Building' an active campaign on ERP labeling and promoting the benefits of quality standards through the 'Benchmark' scheme.

How have you influenced, or are you attempting to influence their position?
Wolseley UK is an active member of the HHIC providing the chair of the Merchants Group and broadly agrees with the strategy of reducing demand and incentivising the uptake of energy efficiency and renewable technologies. Ferguson remains steadfast in our commitment to reducing greenhouse gas emissions, and continues to engage with HHIC based on this consistent position.

Trade association
Associated Builders and Contractors (ABC)- Ferguson U.S.

Is your position on climate change consistent with theirs?
Mixed

Please explain the trade association's position
The Associated Builders and Contractors hold the position that environmental regulations will stifle economic opportunity and increase energy and material prices for the construction industry. ABC also states that in addition to alternative and renewable energy development, a traditional mix of domestic fossil fuels must also be developed.

How have you influenced, or are you attempting to influence their position?
While ABC may have strong positions regarding environmental regulations, Ferguson is steadfast in our commitment to the Environment and reducing greenhouse gas emissions. We do not participate in ABC's lobbying efforts.

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?

Our efforts to align our business strategy with our climate change risks and opportunities will ensure that our direct and indirect activities that influence policy are consistent with our overall climate change strategy. Ferguson is now a primarily North American business, and does not engage in lobbying. We share our climate change strategy publicly with all stakeholders through our Annual Report of Accounts, as well as our TCFD disclosure on our website. Additionally, our executive leadership team, who are tapped to serve as representatives to these trade industry associations, are briefed on our corporate policies and strategies related to climate change.

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
In mainstream reports, incorporating the TCFD recommendations

Status
Complete

Attach the document
ferguson_plc_annual_report_2019.pdf

Page/Section reference
42-46

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Publication
In voluntary communications

Status
Complete

Attach the document
TCFD Scenario Analysis-ARA (1).pdf

Page/Section reference
1-2

Content elements
Risks & opportunities

Comment

C15. Signoff

C-FI

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

C15.1

(C15.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Mike Brooks, Chief Marketing Officer (CMO)	Other C-Suite Officer

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

	I am submitting to	Public or Non-Public Submission
I am submitting my response	Investors Customers	Public

Please confirm below
I have read and accept the applicable Terms