

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 centres 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
Row 1	August 1 2017	July 31 2018	No	<Not Applicable>

C0.3

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

- Canada
- Netherlands
- Switzerland
- 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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas 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)	As stated in our 2018 Annual Account and Reports, our Group CEO is responsible for "Developing and implementing policies integral to improving the business, including in relation to health and safety and sustainability".
Board-level committee	The Board has set targets for Ferguson plc's carbon and waste performance, and received updates at least twice a year regarding group performance. These updates include reviewing project implementation and performance, and review opportunities to integrate sustainability measures into capital expenditures.

C1.1b

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

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
Scheduled – some meetings	<ul style="list-style-type: none"> 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 	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 reviews 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)	Responsibility	Frequency of reporting to the board on climate-related issues
Sustainability committee	Both assessing and managing climate-related risks and opportunities	Quarterly
Environment/ Sustainability manager	Both assessing and managing climate-related risks and opportunities	Half-yearly
Other C-Suite Officer, please specify (Chief Marketing Officer)	Both assessing and managing climate-related risks and opportunities	As important matters arise
Chief Executive Officer (CEO)	Assessing climate-related risks and opportunities	As important matters arise
Risk committee	Both assessing and managing climate-related risks and opportunities	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. This position was selected for responsibility for climate change to ensure 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 the results of the sustainability materiality refresh in 2018, including associate performance on sustainability awareness and literacy questions. The Executive Committee also reviewed and approved a five-year strategic plan for the Sustainability Program at the start of FY18. 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 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 as appropriate. 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 Ecovadis 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 Group Head of Risk Management and Director of Sustainability to ensure that business continuity and resiliency strategies are in place.

Additionally, the Internal Audit Department is a steadfast champion of Ferguson's sustainability efforts, and has integrated sustainability criteria into all internal audits that they conduct across the business, including acquisitions. They report on their findings to the Director of Sustainability and the Board Audit Committee whenever areas of improvement are identified.

C1.3

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

Yes

C1.3a

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

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

Ferguson plc's Director of Sustainability has bonusable objectives for creating and delivering on strategy for reducing carbon emissions and reducing waste.

Who is entitled to benefit from these incentives?

Environment/Sustainability manager

Types of incentives

Monetary reward

Activity incentivized

Emissions reduction target

Comment

The Environment Manager for Wolseley UK has bonusable objectives regarding business performance against carbon and waste goals.

Who is entitled to benefit from these incentives?

Business unit manager

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

Wasco, in the Netherlands, employs a Business Unit Manager for Sustainable products who is targeted and rewarded on development of sales of low-carbon products.

Who is entitled to benefit from these incentives?

Other, please specify (Auto-allowance recipients at Ferguson)

Types of incentives

Monetary reward

Activity incentivized

Behavior change related indicator

Comment

All employees at Ferguson who receive an auto-allowance can receive an increased allowance per month for driving vehicles that achieve at least 30 miles per gallon and meet Ferguson's vehicle standards.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term 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	10	As our business is always changing, long-term is considered 5-10 years.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Six-monthly or more frequently	>6 years	Over 60 standard risk types are evaluated over this period. We don't consider principal risks that far out but we do consider emerging risks like climate that far in to the future.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

Ferguson plc operates a multi-disciplinary company-wide risk management process covering strategic, operational, financial and legal/regulatory risks. There are over 60 standard risk types. This includes, for example, changes in customer behavior, changes in taxes and regulations and natural catastrophe/ weather related risk exposures.

At the Ferguson plc, operating company level, and Group functions, risks of all types are reviewed and scored by impact on the company (financial, reputational, operational or health & safety impacts) and likelihood of occurrence. We define a substantive financial impact as any of the Principal Risks for the Group breaching the following thresholds:

- No tolerance for any event that would impact payment of the **Group's dividend**
- Reduction of 3% or more of **Annual trading profit**
- Reduction of 2% or more of **Value of net assets**
- A significant adverse impact that cannot be corrected or substantially reduced through mitigation actions, requiring a re-appraisal of the **Group's strategy** and its implementation
- A significant adverse impact that cannot be corrected or substantially reduced through mitigation actions, requiring a comprehensive re-appraisal of the **Group's operating procedures**
- An impact that seriously damages the Company's **reputation** for 12 months or more

The company-level assessment does include considerations of key assets, primarily key distribution centres 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.

Businesses and Group functions submit risk reports approximately one month ahead of the March and September Audit Committee meetings. Risks are first assessed on an 'inherent' basis (i.e. pre-control) by multiplying probability and impact. Scores are selected using predefined scales. This multiplication of probability by impact gives an inherent risk rating from 1 up to a maximum score of 25. Risks are plotted on a heatmap to provide a summary view. Risks are also assessed and scored after controls for a residual risk rating. Once received, risk reports are consolidated by the Group Head of Risk. They are then analysed with Group functions to produce draft scores for each of the principal Group risks. These scores (and prioritisation) are then discussed with members of the Executive Committee at a risk review meeting before being submitted to the Audit Committee for its consideration. To date, risk assessments have been qualitative in nature, based on discussion and experience and using the scales above as guidance. Ferguson discloses this information on pages 45-49 of our 2018 Annual report of Accounts, which is signed by the Group CEO following Board approval.

The Director of Sustainability meets with subject matter experts throughout the business (Supply Chain, Sourcing, Logistics, Customer and Marketing Analytics, Public Relations, Legal, Risk) in an iterative approach to capture Ferguson-specific risks and opportunities related to climate change and provides a summary to the Group Head of Risk to include from an ESG risk perspective.

C2.2c

(C2.2c) Which of the following 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, labour 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 2018 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.

	Relevance & inclusion	Please explain
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 2018 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
Technology	Relevant, always included	New competitors and technology were assigned a high inherent risk level in our Annual Report and Accounts 2018. 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 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 continued to increase over FY17 and FY18 at an increasing pace, indicating expanding growth in the market. In addition, existing single-family home sales is a good indicator for the strength of the market and tends to be a driver of remodelling spend. The seasonally adjusted annual rate of sales remained high at around 5.5 million throughout FY18. 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. The AIA Billings Index – Commercial/Industrial is also an indicator for the civils market. The non-residential construction Put In Place survey is an indicator of the strength of the market, reflecting the historical amount spent each month on construction. After contracting for the first two quarters of 2017/18 the value of spending rose in the final two quarters of FY18. The strength of the industrial market is indicated by the Institute of Supply Chain Management Purchase Managers Index. Any reading above 50 indicates that the manufacturing economy is generally expanding, below 50 indicates that it is generally declining. The index was at levels above 50 throughout 2017/18 indicating strong growth in the market in that period. Specific to climate change, Ferguson also continues to review Green Building Materials Market Reports, and the National Association of Home Builders/ Wells Fargo Housing Market Index.
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 2018 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.
Upstream	Relevant, sometimes included	We work with our suppliers when possible to include climate risk planning. To mitigate this inherent risk, our Sourcing team encourages dual and multiple sourcing whenever possible to maintain the integrity of our supply chain. This an essential part of our vendor agreements, and extremely important to our Ferguson Own Brand products (Mirabelle, PROFLO, Miseno, Koldfront, Signature Hardware, Jones Stephens, Build.com Essentials, etc). With over 43,000 suppliers sourcing over one million products from all over the world, mapping upstream impacts due to climate change remains a challenge.
Downstream	Relevant, sometimes included	We include our customers in our climate change reporting and offer a range of products to help our customers meet their goals. With this priority in mind, we offer products with WaterSense and EnergySTAR certifications, but emerging standards for sustainable products may require support for additional product certifications. On p40 of our 2018 Annual Account and Reports, we identify 'Responsible sourcing' and 'Promoting "eco" products' as two focus areas to address our top risks and compliance requirements. We managed this risk by requiring our suppliers, contractors and agents to adhere to our Code of Conduct and to adopt similar standards, and we strive to be a positive link in the sustainable construction supply chain. A downstream risk we consider is the impact of the ultimate destination of our products on the environment. We have challenges diverting acrylic and fiberglass tubs from landfills and assume that our customers would also have this issue. Climate risk may make it increasingly difficult to recycle certain types of products and costs to landfill products may increase as landfill space is in higher demand. We are managing this risk by partnering with non-profits that can accept scratch and dent materials, and we are also transitioning to a sustainability reporting platform that will allow us to perform life-cycle assessments on products.

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

The Company's strategy combines a top-down resource allocation process with a strong emphasis on bottom-up, local business unit strategies to address both risks and opportunities posed by climate change. For example, sustainable building product opportunities and environmental targets are formally included for the Board's regular review of the sustainability program. Additionally, as described in the Risk Management process, which ultimately reports to the Audit Committee, business owners are assigned to each risk with a corresponding mitigation strategy. In some of our businesses, specific revenue and profit based targets have been set regarding the sale of high efficiency products, which represent a driver of growth for these businesses. For other areas of our business, new product development has offered an opportunity for growth.

Climate change is integrated into these local business strategies as one of a number of factors. Where it is considered, the primary drivers are the need to capitalise on market opportunities presented by climate change and the publicly stated desire to reduce carbon emissions. Market opportunities primarily relate to the development of new business revenues from energy-efficient, sustainable or renewable energy products. Example of such products include low flow products, programmable thermostats, high efficiency lighting fixtures, energy efficient boilers and ground source heat pumps.

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. However, 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 fact, in 2018, fixtures from Ferguson's Mirabelle and Park Harbor product lines won prestigious Platinum ADEX awards. This is the highest honour for the Awards for Design Excellence, a national product design competition in the United States. The Mirabelle Sitka one-piece high efficiency skirted toilet won its category, chosen for a strong emphasis on design and sustainability, and other examples included Park Harbor LED fixtures. To learn more about these products, please see our pressroom: <https://www.fergusonpressroom.com/fergusons-mirabelle-and-park-harbor-win-design-award/>.

As another example, Ferguson successfully developed and marketed a PROFLO Greenlee toilet that not only meets WaterSense standards, but also has an ultra-high efficiency MaP rating while only using 0.8 gallons per flush (the lowest in the market for gravity fed toilets). Ferguson has also developed a "green choice" product label that is available on our websites (Ferguson.com, Build.com, Wolseley.co.uk) and allows consumers to filter for energy efficient or low flow products.

Regarding Ferguson's operations, all businesses have targets to reduce their carbon emissions and waste sent to landfill. These business-level targets are aggregated to Group-level targets which are published in the Annual Report and audited annually by a third-party environmental data assurance firm. Our Wolseley UK business also maintains an ISO 14001 environmental management system.

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

Physical risk

Primary climate-related risk driver

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

Type of financial impact

Reduced revenues from lower sales/output

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. 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, our 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

Current

Likelihood

Virtually certain

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)

0

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. Additionally, the damaging nature of a severe weather event often forces a community to rebuild, creating a greater demand for our products in the local market. Therefore, our impacted locations do not typically see a negative impact in our sales. Depending on the size and services that a branch offers, our distribution network may be impacted by a severe weather event, however, with 19 distribution centres globally, we are well-equipped to handle a shift in our supply chain logistics.

Management method

The loss of an important branch or distribution centre 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 centres 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. A comprehensive insurance programme is purchased, covering property damage and business interruption risks. In the process of determining coverage amounts, our insurers review each site in our portfolios' exposures to named windstorms, storm surge, earthquake, severe convective storm, and flood. Their modeling 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.

Cost of management

240000

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Supply chain

Risk type

Transition risk

Primary climate-related risk driver

Technology: Substitution of existing products and services with lower emissions options

Type of financial impact

Costs to adopt/deploy new practices and processes

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 sulphur 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> • "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.

Management method

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.

Cost of management

0

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Technology: Costs to transition to lower emissions technology

Type of financial impact

Capital investments in technology development

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. 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 in to 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)

11000000

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.

Management method

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). Over three years the estimated cost of subscription fees and salary is approximately \$1.7m.

Cost of management

1700000

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?

Customer

Opportunity type

Markets

Primary climate-related opportunity driver

Access to new markets

Type of financial impact

Increased revenues through access to new and emerging markets (e.g., partnerships with governments, development banks)

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.

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)

100000000

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.

Strategy to realize opportunity

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. 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.

Cost to realize opportunity

2250000

Comment**Identifier**

Opp2

Where in the value chain does the opportunity occur?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact

Better competitive position to reflect shifting consumer preferences, resulting in increased revenues

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?

Yes, a single figure estimate

Potential financial impact figure (currency)

900000000

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 eleven percent a year. Assuming this increase in sales continues at the current pace, Ferguson expects our four year market opportunity to be approximately \$900m.

Strategy to realize opportunity

Situation: As the market for WaterSense products continues to grow, investment will be required to realize this opportunity. While Ferguson can use 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.

Cost to realize opportunity

15000000

Comment

Identifier

Opp3

Where in the value chain does the opportunity occur?

Supply Chain

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Type of financial impact

Reduced operating costs (e.g., through efficiency gains and cost reductions)

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)

5000000

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 centre transfers, detention savings, operational costs savings and external storage savings. Ferguson has quantified this opportunity as \$5 million over the next four years, but the increased inventory efficiency mentioned above which is still unquantified may offer the largest opportunity for savings.

Strategy to realize opportunity

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.

Cost to realize opportunity

0

Comment

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted	An internal analysis of our sales for WaterSense products versus non-WaterSense products from 2015 to 2018 demonstrates our ability to capture the water efficient product 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. This could have a long-term moderate impact on our business if this trend continues or strengthens, because many of the plumbing supplies goods that we distribute are eligible for water performance certifications.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	As a company with a large fleet network, improvements in fleet fuel economy and telematics have the potential to significantly reduce our greenhouse gas emissions. Climate change is already showing signs of impacting our business. Droughts and the subsequent lowering of the water level in the Panama Canal forced our carriers to reduce the amount of cargo they could bring through the waterway (https://www.joc.com/port-news/panama-canal-news/panama-canal-draft-restrictions-limiting-container-ship-loadings_20190507.html). We had to conduct an analysis to determine if it would be cheaper to just ship to the West Coast and move goods by rail across the United States versus having to put more shipments through the canal. Another part of our supply chain which is vulnerable to climate change is the processing of raw material for our products. While we do not manufacture goods, the cost of producing these goods does impact our business. Changes in temperature and humidity make a big difference in how clay, slip, and water are processed through a kiln and are made in to pottery. Entire kiln runs are scrapped if there proper mixture of slip & clay is not processed under the proper environmental conditions. Overall, there are low short term risks associated with transportation regulations and supply chain disruption since we build redundancies in to our supply chain, but high impact risks in the longer term as climate change makes earlier planning less relevant.
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	An increase in natural disasters due to changing weather patterns resulting from climate change has increased the need for Business Continuity planning and a resiliency strategy. Four of our branches in California are considering installing permanent backup generators to mitigate risk of electrical failure (and PG&E's public safety power shutdowns) due to wildfires. We are also pursuing a Green Globes certification for our new headquarters building in Newport News. Green Globes promotes green building best practices and resilience considerations. Maintaining and adapting business resiliency plans to new conditions should be low impact, as we are implement such practices at our sites.
Investment in R&D	Impacted for some suppliers, facilities, or product lines	Depending on consumer preferences, our business may need to invest more resources in the R&D of "eco" products that offer a sustainability benefit. Investment in R&D is low impact since most R&D research is done by manufacturers that we partner with.
Operations	Impacted for some suppliers, facilities, or product lines	An increase in natural disasters due to changing weather patterns resulting from climate change has increased the need for Business Continuity planning and a resiliency strategy. Our Group Head of Risk Management oversees this function. The Fourth National Climate Assessment predicts fuel shortages and higher electricity costs resulting from rising temperatures reducing the efficiency of power generation while increasing energy demands. An increase in price of electricity and fuel would increase our cost of operation. To avoid these risks, we could proactively invest in fleet efficiency technology and promote building efficiency measures such as HVAC system upgrades, smart thermostats, building envelope improvements, and lighting retrofits. Investing in low-carbon renewable electricity offers both a chance to mitigate the amount of climate change that will impact the business and gives us the chance to contractually lock in long-term electricity rates ahead of price increases. Since electricity and natural gas make up less than 5% of our operational spend, this is a low impact risk on overall operational spend, but could have a high impact at the local level. Impact of changing fuel costs can be mitigated by partnering with third party transportation companies dedicated to fleet efficiency.
Other, please specify	Please select	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have been factored into your financial planning process.

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	Ferguson has not had any critical infrastructure damaged by acute weather events, but our property insurance carrier still thoroughly analyzes natural catastrophe risks at all of our sites. We have not experienced any drastic impacts on revenue from this type of risk. Our revenue heavily linked with construction and repairs and we consider the climate opportunities to outweigh climate risks to our business. The magnitude of this net opportunity is moderate.
Operating costs	Not yet impacted	Ferguson has not yet experienced any significant shifts in operating costs as a result of climate change. The two nearest term opportunities or risks are the IMO 2020 low sulfur fuel shipping regulation and the import center supply chain efficiency improvement. The net risk from the sulfur regulation on operating costs is greater in magnitude than the net opportunity from the supply chain efficiency improvements. Overall, there is a low risk to Ferguson's operating costs in the short term.
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	Resiliency strategy is being incorporated into capital expenditures that occupy a physical imprint in low-lying areas affected by climate change. All large capital expenditures go through a rigorous approval process by the finance committee before being approved. The climate induced risks and opportunities have a moderate impact on current capital expenditures and this impact should increase in magnitude over time as climate risks are realized.
Acquisitions and divestments	Impacted	All acquisitions and divestments are reviewed by the Risk Management group and are evaluated for financial risk and climate change considerations. Our property insurance partners review exposure to Named Windstorm, Surge, Earthquake, Severe Convective Storm, and Flood. We have the ability to map out the entire Ferguson portfolio and determine (by individual location) which are exposed to each hazard. They use SpatialKey for geographic mapping, flood zone determinations, CAT (Catastrophe) zone determinations, real-time hurricane / named storm updates, past EQ scenarios, etc. They also use RMS for CAT modeling including the perils mentioned above. They use AIR for the same perils above however, this software is not as widely used in the market. They also have proprietary tools which allows them to analyze international and domestic location exposure – linking RMS software and carrier data – for an entire portfolio. This software is still in pilot phase but is close to completion. The above risks and opportunities should have low impact on our acquisitions and divestments. We have already divested many of the non-plumbing businesses in our portfolio and Ferguson's business strategy will continue to focus on acquiring businesses in the same industry as us.
Access to capital	Impacted	We have noticed a growing investor focus on Environmental, Social, and Governance (ESG) ratings. We have heard from Citi that investors are motivated to take ESG in to account when deciding how to allocate their capital: to avoid investor 'complicity' with activities that they object to; to encourage/incentivize companies to improve their impact on society, the environment, or the economy; and to generate investment outperformance. Takeaways from Goldman Sachs were that: the new age of investors cares about ESG, ESG performance can help them pick winners, and ESG is the fastest growing area in active management. A failure to invest in sustainability measures now could impact our access to capital in the future. This is a moderate risk.
Assets	Impacted	Most of our assets exist in the form of inventory and physical branch locations. Due to the widespread distribution of our branches, we expect climate risks to continue impacting our assets. The most relevant climate risk to our assets is acute physical risk. We have only seen low impact so far, with the worst incident being damage at a branch in Masbeth, NY as a result of Superstorm Sandy. To date, we have not experienced any major loss of assets at distribution centers, but climate may impact them more as extreme weather events become more severe and frequent. Climate risks pose a moderate long term risk to our assets.
Liabilities	Not impacted	Climate is not expected to impact our financial liabilities. Our Accounts Payable team manages all short-term obligations to pay suppliers for products and services purchased with credit, and these are currently being handled without issue.
Other	Please select	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

No, but we anticipate doing so in the next two years

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

The main way climate-related issues are integrated into Ferguson's business strategy are through our five year goals. As mentioned in earlier sections, these emissions reduction and waste reduction targets were set by the Board of Directors in FY16.

Our sustainability strategy is directly connected with our business strategy, through building on a foundation of Best Associates, Efficient Operations and Own Brand (sustainable products and solutions). Ferguson's leadership knows that associates care deeply about sustainability issues, and are focused on utilizing associate engagement to reach our publicly stated goals. A communication plan is in place to ensure that executive support of these initiatives and sustainability are integrated into our business strategy communications. Additionally, targeted communications are sent to associates on key holidays, like Earth Day.

The most substantial business decision made to integrate sustainability into our business strategy is focused on Efficient Operations. As new facilities are proposed for development, the Sustainability Department is integrated at the point of specification to ensure that the building has key sustainability features, and is evaluated for onsite renewable energy. This has a long-lasting impact as most of our Distribution Centers are in operation for over fifteen years, and as they are some of the largest energy users in Ferguson's portfolio, converting to renewable energy has a substantial impact on our carbon footprint.

Additionally, the Own Brand team has focused on award-winning Sustainable Products and Solutions, like fixtures from Ferguson's Mirabelle and Park Harbor product lines won prestigious Platinum ADEX awards. This is the highest honor for the Awards for Design Excellence, a national product design competition in the United States. The Mirabelle Sitka one-piece high efficiency skirted toilet won its category, chosen for a strong emphasis on design and sustainability, and other examples included Park Harbor LED fixtures. To learn more about these products, please see our pressroom: <https://www.fergusonpressroom.com/fergusons-mirabelle-and-park-harbor-win-design-award/>. As another example, Ferguson successfully developed and marketed a PROFLO Greenlee toilet that not only meets WaterSense standards, but also has an ultra high efficiency MaP rating while only using 0.8 gallons per flush (the lowest in the market for gravity fed toilets). Ferguson has also developed a "green choice" product label that is available on our websites (Ferguson.com, Build.com, Wolseley.co.uk) and allows consumers to filter for energy efficient or low flow products.

In many cases, department-specific goals are in place to ensure that business priorities align with sustainability priorities. For example, the Fleet Management Team in the U.S. has associates who are evaluated on their ability to incorporate vehicles with new fuel technology, and pursue regional incentives for replacing older fleet vehicles.

C3.1g

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

We recently hired a new Group Director of Sustainability, who has been tasked with performing climate-related scenario analysis to continue to improve our business strategy in regards to climate change. We anticipate using climate-related scenario analysis in our 2019 Annual Report of Accounts. Involved stakeholders will include:

- Group Head of Risk Management
- Group Head of Compliance
- Director of Supply Chain
- Investor Relations Manager
- Senior Director of Category Management
- Director of Transportation
- VP of Sourcing
- Director of Market Research
- Director of Public Relations
- VP of Communications
- Senior Facilities Manager
- Director of Sustainability
- Sustainability Analyst

We will consider transition risks in 4 categories and physical risks at the chronic and acute levels:

- Policy and Legal
- Technology
- Market
- Reputation

Each of these will be considered in a 2 degree Celsius warming scenario (DDPP Deep Decarbonization Pathways Project) and a 'Limited Mitigation Scenario' (RCP8.5). Climate related opportunities will also be explored.

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

Scope

Other, please specify (Scope 1 (location based) + Scope 2 (location based) + Scope 3 emissions that are within Ferguson plc's reporting boundary: outsourced road-based transport and air/rail travel)

% emissions in Scope

100

Targeted % reduction from base year

10

Metric

Other, please specify (tCO2e per \$m revenue)

Base year

2016

Start year

2016

Normalized base year emissions covered by target (metric tons CO2e)

22.2

Target year

2021

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

% of target achieved

100

Target status

Achieved

Please explain

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.

% change anticipated in absolute Scope 1+2 emissions

10

% change anticipated in absolute Scope 3 emissions

10

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

Target

Waste

KPI – Metric numerator

US Tons of waste produced

KPI – Metric denominator (intensity targets only)

Group Revenue

Base year

2016

Start year

2016

Target year

2021

KPI in baseline year

3.18

KPI in target year

2.7

% achieved in reporting year

0

Target Status

Underway

Please explain

Applies to all parts of the business. Ferguson plc also set a five-year target (from August 1st, 2016 to July 31st, 2021) to reduce waste by 15 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 under target. This is measured in tonnes (not in carbon). Ferguson plc produced 55,843 tonnes of waste in the baseline year. Using a conversion factor of .099759 tCO₂e per tonne of landfilled waste and 0.021 tCO₂e per tonne of either recycled or incinerated waste (source: 2019 UK Government conversion factors for Company Reporting) this translates to 5331 tCO₂e. The value for the normalized base year emissions is given in metric tonnes of CO₂e per million US dollars.

Part of emissions target

Waste is not part of our emissions scope, but has been calculated above.

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

Target

Other, please specify (Recycling Rate)

KPI – Metric numerator

Tons of waste recycled

KPI – Metric denominator (intensity targets only)

Total tons of waste produced

Base year

2016

Start year

2016

Target year

2021

KPI in baseline year

30

KPI in target year

30

% achieved in reporting year

26.4

Target Status

Underway

Please explain

This absolute goal is to increase proportion of total waste to 40% by FY2021. At the time this 5 year goal was established, Ferguson recycled 30% of our waste and are at 26.4% as of FY18.

Part of emissions target

Recycling rate is not a part of an emissions scope

Is this target part of an overarching initiative?

No, it's not part of an overarching initiative

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	1	4377
To be implemented*	1	0.55
Implementation commenced*	4	5200
Implemented*	2	508
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 type

Process emissions reductions

Description of initiative

New equipment

Estimated annual CO2e savings (metric tonnes CO2e)

200

Scope

Scope 1

Voluntary/Mandatory

Voluntary

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

95000

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

360000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Applied XL Hybrid upfit to fifty vehicles in the Ferguson fleet (F250 trucks and transit cargo vans). Technology works by converting the kinetic energy of the vehicle and returning it as electrical power to the vehicle battery pack, increasing its efficiency.

Initiative type

Energy efficiency: Processes

Description of initiative

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

308

Scope

Scope 3

Voluntary/Mandatory

Voluntary

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

2600000

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

1500000

Payback period

1-3 years

Estimated lifetime of the initiative

11-15 years

Comment

Packsizes machines were installed at every U.S. Distribution Center in the Ferguson network. These machines create on demand packaging for products, using less corrugated cardboard, minimizing void fill, optimizing warehouse and fleet space, and reducing the need for filler material.

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.
Dedicated budget for energy efficiency	Investment in emissions reductions activities across all Ferguson plc businesses is made on a case by case basis depending on the carbon savings and return on investment for each project. There is a dedicated budget for planned energy efficiency initiatives.
Financial optimization calculations	The primary driver of investment in emissions reduction activities is the financial business case.
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.

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

Please select

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

Comment

Level of aggregation

Company-wide

Description of product/Group of products

Ferguson US uses their own distribution fleet to collect stock from suppliers when they are delivering nearby, which reduces the mileage that our suppliers make. During FY2017, over 5,000,000 supplier kilometres were avoided through Ferguson's backhaul program.

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

Please select

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

Please select

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

Comment

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

Other, please specify

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

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)

173365

Comment

FY16 from 8/2015 - 7/2016 In recent years, the reduction in our portfolio of businesses has decreased our physical footprint and therefore our carbon footprint. To aid comparability of performance we have removed non-ongoing operations from the current and prior year periods. Our reported scope 1 emissions dropped from 194,079 to 173,365.

Scope 2 (location-based)

Base year start

August 1 2015

Base year end

July 31 2016

Base year emissions (metric tons CO2e)

128448

Comment

FY16 from 8/2015 - 7/2016 In recent years, the reduction in our portfolio of businesses has decreased our physical footprint and therefore our carbon footprint. To aid comparability of performance we have removed non-ongoing operations from the current and prior year periods. Our reported scope 1 emissions dropped from 144,189 to 128,448.

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 Scope 1 and Scope 2 emissions.

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

Other, please specify

C5.2a

(C5.2a) Provide details of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions.

DEFRA Greenhouse Gas Conversion Factor Repository: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

Bitzer International Refrigerant Report: https://www.bitzer.de/shared_media/documentation/a-501-19.pdf

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)

181604

Start date

August 1 2017

End date

July 31 2018

Comment

Fiscal year 2018 scope 1 emissions as stated in Annual Report and Accounts 2018

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

110387

Scope 2, market-based (if applicable)

3066.8

Start date

August 1 2017

End date

July 31 2018

Comment

Fiscal year 2018 scope 2 emissions as stated in Annual Report and Accounts 2018

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

Excluded locations include sourcing offices in Taiwan (59 employees), and China (73 employees). Excluded locations will be assessed annually to ensure that it is still suitable to deem them immaterial.

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

Emissions are not relevant

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

Please select

Explain why this source is excluded

Very small office locations. Excluded locations will be assessed annually to ensure that it is still suitable to deem them immaterial. We define materiality as the magnitude of misstatement in the financial statements that makes it probable that the economic decisions of a reasonably knowledgeable person would be changed or influenced. We use materiality both in planning the scope of our audit work and in evaluating the results of our work. For Group financial statements, the materiality threshold in fiscal year 2018 was \$65 million, approximate 5% of profit before taxes excluding exceptional items and impairment of interests in associates.

C6.5

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

Purchased goods and services

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>

Explanation

Ferguson has a vast supplier base and a large, complex supply chain. Carbon emissions related to Ferguson's purchased goods and services have not been measured. We are working to incorporate scope 3 emissions from sea cargo shipments over the next 2 years and begin conducting life cycle analyses on our most popular products.

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>

Explanation

Ferguson is not a manufacturer and with the sale of the French business, no machinery for capital goods has been purchased by any other areas of the business.

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

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>

Explanation

Scope 3 emissions related to electricity (distribution) and other fuels (well-to-tank) are relevant but have not yet been calculated.

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

77001.5

Emissions calculation methodology

The emissions related to outsourced transportation are based either on a percentage of total transportation costs that is attributed to fuel (as agreed with the transport provider) and an average cost per litre, or on known litres of fuel or kms traveled (as confirmed by the transport provider or calculated internally). The reported kms and litres are covered in carbon using the DEFRA emissions factors for fuel consumption or for freighting goods (kms). The above figure is the sum of outsourced transportation emissions for Ferguson US, Wolseley Canada, Wolseley UK, Soak.com, and Wasco.

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

100

Explanation

Some Ferguson businesses use an owned fleet. Others have chosen to outsource all or part of their goods transportation requirements. The carbon related to this outsourced goods transportation is tracked and reported (both internally in Ferguson's external disclosures). Note: There are additional Scope 3 emissions that could be included within 'Upstream transportation and distribution' such as supplier deliveries to Ferguson. Ferguson has a large and complex supply chain which involves over 44,000 vendors delivering product and using third party logistics. These emissions are relevant but have not yet been calculated.

Waste generated in operations

Evaluation status

Not relevant, calculated

Metric tonnes CO₂e

4833

Emissions calculation methodology

Waste tonnage is reported to Group by all businesses every six months. Using a conversion factor of .099759 tCO₂e per tonne of landfilled waste and 0.021 tCO₂e per tonne of either recycled or incinerated waste (source: 2019 UK Government conversion factors for Company Reporting) for 45410 metric tonnes of landfilled waste, 1438 metric tonnes of incinerated waste, and 12992 metric tonnes of recycled waste translates to 4833 tCO₂e in FY18.

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

100

Explanation

Emissions from waste are not included in our company basis of reporting, but their impact has been calculated.

Business travel

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

8522.8

Emissions calculation methodology

Business travel in employee owned vehicles is tracked through expense management systems, either in litres purchased or kms travelled. Air and rail travel, in Ferguson's larger businesses, is tracked by dedicated business travel organisations and in smaller business through expense management systems. Air travel data is split by short (0-500 km), medium (500-1600km), and long haul (>1600km) and the appropriate emissions factors applied. The reported kms and litres are converted into carbon using the DEFRA emissions factors for business travel and people transport. The above figure is the sum of business travel emissions for Ferguson US, Wolseley Canada, Wolseley UK, Soak.com, and Wasco.

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

100

Explanation

Business travel includes air and rail travel and travel in employee owned vehicles for business purposes.

Employee commuting

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>

Explanation

With 35,285 reported associates, employee commuting likely contributes materially to our scope 3 greenhouse gas emissions. While no efforts have been made yet to characterize the scale of emissions from employee commuting, our ongoing transition to a new reporting software should provide functionality to assess this factor within the next 2 years.

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>

Explanation

Ferguson's leased assets are included in Scope 1 and Scope 2 reporting. There are no upstream leased assets.

Downstream 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>

Explanation

Ferguson has a large and complex supply chain which involves over a million customers collecting product. The carbon emissions relating to customer transportation have not yet been calculated.

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>

Explanation

Not applicable to Ferguson. Ferguson sells "finished" products that are used but not processed further.

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>

Explanation

The use of some of Ferguson's products will result in carbon emissions, for example, gas boilers. The emissions related to product use have not yet been calculated.

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>

Explanation

Ferguson has a vast product portfolio which requires disposal in a number of different ways (recycling, recovery as WEEE under the Waste Electrical and Electronic Equipment Directive etc). The carbon related to end of life treatment of sold products has not yet been calculated.

Downstream leased assets

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>

Explanation

Ferguson sublets a small number of locations for which emissions have not been calculated.

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>

Explanation

Ferguson does not operate any franchises.

Investments

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>

Explanation

Ferguson Ventures is the area of the company that focuses on investments, and is mostly focused on technology acceleration. In the scope of our entire portfolio, their investments have not achieved our threshold for materiality. Here are their priorities (learn more at <https://fergusonventures.com/>): Connected Ecosystems – We seek opportunities to replace, enable, or create processes that will streamline and strengthen value chains across the industry Digital Experiences – Creating a best-in-class customer experience with industry leading content Emerging Technology – Exploring and leveraging emerging technologies to enhance customer and associate experiences through Augmented / Virtual Reality, Internet of Things (IoT), Artificial Intelligence and Machine Learning If anything, we expect that enhancing our technology capabilities will allow us to further streamline our operations and reduce our greenhouse gas emissions.

Other (upstream)

Evaluation status

Relevant, calculated

Metric tonnes CO₂e

31238.2

Emissions calculation methodology

"Vehicle Fuel Consumption – People Transport / Personal or hired vehicles" includes all fuel consumed related to road-based transport of people for business purposes using hired or personal cars. This might include driving to a regional meeting, or driving to meet a supplier. Note that the above category captures only the transport of people by road-based travel (assumed to be passenger cars). Transport of people by air and rail is covered in the Business Travel category. Emissions calculated by summing either mileage or distance traveled for Ferguson US, Wolseley UK, Wolseley Canada, SOAK, and Wasco. Next, emissions factors from UK 'Government emission conversion factors for greenhouse gas company reporting' are applied to find metric tonnes of CO₂e.

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

100

Explanation

Other (downstream)

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>

Explanation

We do not expect any other downstream scope 3 impacts besides the 7 downstream Scope 3 factors from the GHG protocol which are listed above.

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered 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

14.1

Metric numerator (Gross global combined Scope 1 and 2 emissions)

291991

Metric denominator

Other, please specify (\$m USD revenue)

Metric denominator: Unit total

20752

Scope 2 figure used

Location-based

% change from previous year

14

Direction of change

Decreased

Reason for change

14.1 in FY18 vs. 16.4 in FY17 is a 14% decrease. Improvement in the intensity metric is attributed to growth in the size of the business and emissions reductions project, which have together improved the tCO₂e/\$m revenue.

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 CO ₂ e)
United States of America	139143.2
United Kingdom of Great Britain and Northern Ireland	21756.3
Canada	19580
Switzerland	0
Netherlands	1426.2

C7.3

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

By business division

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- USA	139143.2
Wolseley UK	21637.3
Ferguson Group Services- UK	94
Wolseley Canada	19580
Ferguson plc HQ- Switzerland	0
Wasco- Netherlands	1426.2
Soak.com- UK	25

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 in market-based approach (MWh)
United States of America	95326.7	0	209224.19	0
United Kingdom of Great Britain and Northern Ireland	7605.6	3066.8	21810.12	10060
Canada	2787.6	0	18434.36	0
Switzerland	0.3	0	12.66	0
Netherlands	1164.5	0	2382.15	0

C7.6

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

By business division

C7.6a

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

Business division	Scope 2, location-based emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Ferguson- USA	95326.7	0
Wolseley UK	7194.2	3066.8
Soak.com-UK	349.1	0
Ferguson Group Services- UK	62.3	0
Wolseley Canada	2787.6	0
Ferguson plc HQ- Switzerland	0.3	0
Wasco- Netherlands	1164.5	0

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	3066.8	Decreased	1	$3066.8 / (126512 + 186907) * 100\% = 1.0\%$ 186907 tCO2e Scope 1 126,512 tCO2e Scope 2 During our reporting period, grid energy was sourced from Haven Power as mixed renewables (biomass, wind, solar)
Other emissions reduction activities		<Not Applicable >		
Divestment	25469	Decreased	8.1	In recent years, the reduction in our portfolio of businesses has decreased our physical footprint and therefore our carbon footprint. To aid comparability of performance we have removed non-ongoing operations from the current and prior year periods. Change in emissions calculations using FY17 values. $25469 / (186907 + 126512) * 100\% = 8.1$
Acquisitions	2631.2	Increased	0.8	On p136 of our 2018 Annual Report and Accounts, Ferguson plc discloses our acquisitions for the fiscal year: Wholesale Group, Inc., Aircoveat B.V., HM Wallace, Inc., 3097-3275 Quebec Inc., Tackaberry Heating Supplies Limited, Duhig and Co., Inc., National Fire, AMRE Supply, Wright Plumbing Supply, Lighting Design Enterprises, Appliance Distributors of Louisiana - Baton Rouge, LLC., Brock-McVey Company, and Safe Step Walk In Tub, LLC. We are unable to parse specifically how much scope 1 and 2 was contributed to by these acquisitions, but an approximation will be made using revenue. These acquisitions contributed \$187m to revenue, and it is assumed that their contribution to our scope 1 and 2 emissions was equal to their income proportion. $\$187m / \$20752m * (181604 + 110387) = 2631.2$ $187 / 20752 * 100\% = 0.8\%$
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?

Location-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 undertakes this energy-related activity
Consumption of fuel (excluding feedstocks)	No
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
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 MWh
Consumption of fuel (excluding feedstock)	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired electricity	<Not Applicable>	10060.9	251671	261731
Consumption of purchased or acquired heat	<Not Applicable>	0	287041	287041
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>	10060.9	538712	548772

C8.2f

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

Basis for applying a low-carbon emission factor

Grid mix of renewable electricity

Low-carbon technology type

Solar PV

Wind

Biomass (including biogas)

Region of consumption of low-carbon electricity, heat, steam or cooling

Europe

MWh consumed associated with low-carbon electricity, heat, steam or cooling

10060

Emission factor (in units of metric tons CO₂e per MWh)

0.30482

Comment

Grid energy was sourced from Haven Power as mixed renewables (biomass, wind, solar) Emission factor from CRC Energy Efficiency Scheme Order: Table of Conversion Factors https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/742381/crc-energy-efficiency-scheme-conversion-factors_v8_2018_19.pdf

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 and/or Scope 2 emissions and attach the relevant statements.

Scope

Scope 1

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

2018 pwc Signed Assurance Report for Ferguson.pdf

Page/ section reference

1 page document

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope

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

2018 pwc Signed Assurance Report for Ferguson.pdf

Page/ section reference

1 Page attachment

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1b

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

Scope

Scope 3- all relevant categories

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Attach the statement

2018 pwc Signed Assurance Report for Ferguson.pdf

Page/section reference

1 page document. Selected Scope 3 emissions are included in the verification from PwC.

Relevant standard

ISAE 3410

C10.2

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

Yes

C10.2a

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

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C4. Targets and performance	Year on year emissions intensity figure	ISAE 3410	We had our carbon and waste data and targets verified by PWC in this reporting year.

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. Additionally, we included our largest suppliers when performing our materiality assessment to determine our key focus areas.)

% of suppliers by number

100

% total procurement spend (direct and indirect)

100

% Scope 3 emissions as reported in C6.5

0

Rationale for the coverage of your engagement

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

50

% Scope 3 emissions as reported in C6.5

0

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

Ferguson shares information regarding environmentally-preferred products by using a sustainable product icon in our showroom locations and on our website. Additionally, we provide content online, where our customers can learn more about their carbon footprint, LEED Certification and environmentally preferred products like tankless hot water heaters and LED lighting: <https://www.ferguson.com/content/green-ideas>.

Impact of engagement, including measures of success

We measure the success of this engagement through the sales of environmentally-preferred products and our rate of online traffic.

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?

Direct engagement with policy makers

Trade associations

C12.3a

(C12.3a) On what issues have you been engaging directly with policy makers?

Focus of legislation	Corporate position	Details of engagement	Proposed legislative solution
Other, please specify (EU Timber)	Support with minor exceptions	Active involvement with policy makers in the adaption of the EUTR (EU Timber regulations) to the laws of the Nordic EU countries.	Continuous involvement in interpretation of the law of the Nordic countries.
Clean energy generation	Support	The Renewable Heat Incentive: Submission to the UK's government consultation.	Strongly supported the proposed changes to the scheme designed to accelerate the uptake of renewable heating systems.
Clean energy generation	Support with major exceptions	ECO: Help to Heat- Submission to the UK's government consultation.	Whilst we indicated our strong support for the overall scheme to help those most in need we disagreed with the retrogressive steps to limit boiler replacements.
Energy efficiency	Support with minor exceptions	The Industrial Strategy: Submission to the UK's government consultation.	Our response to the consultation focused on the 'delivering affordable energy and clean growth' pillar. We did highlight concerns regarding the possibility of further complexity and regulatory burdens for the heating and energy efficiency sector.
Energy efficiency	Support	The Heat and Energy Efficiency Strategy: Submission to the Scottish government's consultation.	Our submission strongly supported the Scottish Government strategy of increasing the use of low carbon heating systems and the uptake of energy efficiency policies.
Energy efficiency	Support with minor exceptions	The Future of Heat: Domestic Buildings: Submission to the UK's government consultation.	We strongly supported the proposals outlined in the consultation mandating the use of products designed to improve efficiency and control. However we felt that there was further scope for improvement by including other measures.
Other, please specify (Renewable Energy- Biomass Suppliers List)	Support	Renewable Energy- Biomass Suppliers List: Submission to the UK government's consultation.	We supported the consultation designed to continue the BSL providing evidence of the quality and impact of biomass fuel for heating.

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 in the countries where we operate are consistent with our overall climate change strategy. Ferguson's "Better Business" framework has 13 material issues which actively support our growth, improve employee engagement, address our top risks and compliance requirements or are important to our stakeholders, customers and suppliers. All our direct and indirect activities that influence policy are guided by our "Better Business" framework and a process for reviewing our engagements is in place with each of our operating regions.

C12.4

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

Publication

In mainstream reports

Status

Complete

Attach the document

Ferguson Annual Report and Accounts 2018.pdf

Page/Section reference

Sustainability section on p42-p43 of the report

Content elements

Governance

Strategy

Risks & opportunities

Emissions figures

Emission targets

Other metrics

Comment

C14. 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.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Marketing Officer	Other C-Suite Officer

SC. Supply chain module

SC0.0

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

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 centres 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 arrangements for entire systems of plumbing and heating systems. The Group distributes and supplies products in the residential, commercial, civil/infrastructure and industrial sectors.

SC0.1

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

	Annual Revenue
Row 1	20752000000

SC0.2

(SC0.2) Do you have an ISIN for your company that you would be willing to share with CDP?

No

SC1.1

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

Requesting member

Stanley Black & Decker, Inc.

Scope of emissions

Scope 1

Allocation level

Business unit (subsidiary company)

Allocation level detail

Only reflects sales from US business for physical locations. Sales from ecommerce not included. However, the US makes up 80% of Group revenue, and only 21% of sales come through e-commerce.

Emissions in metric tonnes of CO₂e

1.59

Uncertainty (±%)

1000

Major sources of emissions

As a wholesale distributor, we only deal with finished products and the only major source of scope 1 emissions we are involved with is using our own fleet to deliver product to consumers.

Verified

No

Allocation method

Allocation based on the market value of products purchased

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

Allocated a portion of our scope 1 emissions from goods transport from our owned and leased fleet to products from Stanley Black & Decker and subsidiary business departments. Next, sales were broken down by shipping method to determine Scope of emissions. Using an allocation based on the market value of products assumes that the average proportion of CO2e to sales for our company is representative of Stanley Black & Decker's line of goods. Shipping method(s) relevant to scope 1 include just 'OUR TRUCK'. A limitation of our approach was that Ferguson's invoice data is only aggregated for physical locations which use our Trilogie software system and only contains US data. Another limitation may be the accuracy and completeness of our product to vendor/customer mapping.

Requesting member

Stanley Black & Decker, Inc.

Scope of emissions

Scope 3

Allocation level

Business unit (subsidiary company)

Allocation level detail

Only reflects sales from US business for physical locations. Sales from ecommerce not included. However, the US makes up 80% of Group revenue, and only 21% of sales come through e-commerce.

Emissions in metric tonnes of CO2e

3.48

Uncertainty (±%)

1000

Major sources of emissions

Transportation of products between our distribution centers and branches. As a wholesale distributor, we only deal with finished products and the only major source of scope 3 emissions we are involved with is moving product from different physical locations we own including distribution centers, warehouses, sales counters, and showrooms.

Verified

No

Allocation method

Allocation based on the market value of products purchased

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

Allocated a portion of our scope 1 emissions from goods transport from our owned and leased fleet to products from Stanley Black & Decker and subsidiary business departments. Next, sales were broken down by shipping method to determine Scope of emissions. Using an allocation based on the market value of products assumes that the average proportion of CO2e to sales for our company is representative of Stanley Black & Decker's line of goods. Shipping methods relevant to Scope 3 include Designated Ship Day, UPS Ground Service, and Truckload/Motor Freight. Includes intercompany shipments. A limitation of our approach was that Ferguson's invoice data is only aggregated for physical locations which use our Trilogie software system and only contains US data. Another limitation may be the accuracy and completeness of our product to vendor/customer mapping.

Requesting member

Signify NV

Scope of emissions

Scope 1

Allocation level

Business unit (subsidiary company)

Allocation level detail

Only reflects sales from US business for physical locations. Sales from ecommerce not included. However, the US makes up 80% of Group revenue, and only 21% of sales come through e-commerce.

Emissions in metric tonnes of CO2e

0.25

Uncertainty (±%)

1000

Major sources of emissions

As a wholesale distributor, we only deal with finished products and the only major source of scope 1 emissions we are involved with is using our own fleet to deliver product to consumers.

Verified

No

Allocation method

Allocation based on the market value of products purchased

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

Allocated a portion of our scope 1 emissions from goods transport from our owned and leased fleet to products from Signify NV and subsidiary business departments. Next, sales were broken down by shipping method to determine Scope of emissions. Using an allocation based on the market value of products assumes that the average proportion of CO2e to sales for our company is representative of Signify NV's line of goods. Shipping method(s) relevant to scope 1 include just 'OUR TRUCK'. A limitation of our approach was that Ferguson's invoice data is only aggregated for physical locations which use our Trilogie software system and only contains US data. Another limitation may be the accuracy and completeness of our product to vendor/customer mapping.

Requesting member

Signify NV

Scope of emissions

Scope 3

Allocation level

Business unit (subsidiary company)

Allocation level detail

Only reflects sales from US business for physical locations. Sales from ecommerce not included. However, the US makes up 80% of Group revenue, and only 21% of sales come through e-commerce.

Emissions in metric tonnes of CO2e

0

Uncertainty (±%)

1000

Major sources of emissions

Transportation of products between our distribution centers and branches. As a wholesale distributor, we only deal with finished products and the only major source of scope 3 emissions we are involved with is moving product from different physical locations we own including distribution centers, warehouses, sales counters, and showrooms.

Verified

No

Allocation method

Allocation based on the market value of products purchased

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

Allocated a portion of our scope 1 emissions from goods transport from our owned and leased fleet to products from Signify NV and subsidiary business departments. Next, sales were broken down by shipping method to determine Scope of emissions. Using an allocation based on the market value of products assumes that the average proportion of CO2e to sales for our company is representative of Signify NV's line of goods. Shipping methods relevant to Scope 3 include Designated Ship Day, UPS Ground Service, and Truckload/Motor Freight. Includes intercompany shipments. A limitation of our approach was that Ferguson's invoice data is only aggregated for physical locations which use our Trilogie software system and only contains US data. Another limitation may be the accuracy and completeness of our product to vendor/customer mapping.

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

https://www.fergusonplc.com/content/dam/ferguson/corporate/investors_and_media/annual-report/Ferguson%20Annual%20Report%20and%20Accounts%202018.pdf

2018 Annual Report and Accounts p14 for revenue country breakdown, p23 for sales channels.

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

Allocation challenges	Please explain what would help you overcome these challenges
Managing the different emission factors of diverse and numerous geographies makes calculating total footprint difficult	With over 44,000 suppliers, we must implement a more robust supplier management system to accurately provide this information to our customers. It would be useful to have a list of key segments of supply chain to consider (such as production vs distribution vs product use vs other?)
Diversity of product lines makes accurately accounting for each product/product line cost ineffective	We are working to develop an omni-channel approach that will track emissions for each order, regardless of the channel. A list of key products from the supplier that they want emissions info for would be helpful.

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

Yes

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

Developing these capabilities will require integrating carbon data into our supplier management platforms and our logistics network. We will be developing a 5 year plan for our Sustainability Program that will include these goals. We are particularly interested in conducting life cycle analyses for our Own Brand products.

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

SC2.2

(SC2.2) Have requests or initiatives by CDP Supply Chain members prompted your organization to take organizational-level emissions reduction initiatives?
No

SC3.1

(SC3.1) Do you want to enroll in the 2019-2020 CDP Action Exchange initiative?
Please select

SC3.2

(SC3.2) Is your company a participating supplier in CDP's 2018-2019 Action Exchange initiative?
No

SC4.1

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

SC4.1a

(SC4.1a) Give the overall percentage of total emissions, for all Scopes, that are covered by these products.
0

SC4.2a

(SC4.2a) Complete the following table for the goods/services for which you want to provide data.
CDP SBD Item Breakdown.xlsx
CDP Signify NV Item Breakdown.xlsx

SC4.2b

(SC4.2b) Complete the following table with data for lifecycle stages of your goods and/or services.

SC4.2c

(SC4.2c) Please detail emissions reduction initiatives completed or planned for this product.

Name of good/ service	Initiative ID	Description of initiative	Completed or planned	Emission reductions in kg CO2e per unit
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SC4.2d

(SC4.2d) Have any of the initiatives described in SC4.2c been driven by requesting CDP Supply Chain members?
No

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms