

Managing our environmental impact

As an enabler of global trade, we work closely with our clients to lead and facilitate positive environmental change in shipping. As a business, we are also committed to monitoring and minimising our carbon footprint.

2021 environmental performance summary

As a consequence of the COVID-19 pandemic and the advised restricted travel conditions, Clarkson's total greenhouse gas ('GHG') emissions are substantially lower than in 2019, as they were in 2020. Overall, on a location basis, our emissions were 3,014 tCO₂e, which is down 68% on 2019 and slightly lower than 2020 (10%). Calculated on a market basis, our emissions were 2,952 tCO₂e. With regards to our carbon emissions intensity, we averaged 1.8 tCO₂e per employee (1.4 tCO₂e per employee for scope 1 and scope 2 emissions only) in 2021.

Recognising our commitment to sustainability (covering both environmental and social aspects), we were awarded a silver medal by Ecovadis in 2021, which puts us in the top 15% of our industry for embedding sustainability across our business.

Our carbon footprint

While some of our offices remained fully open, other offices closed for periods of the year, with our employees working remotely instead. This is reflected in a decrease in the use of electricity (8%). However, natural gas consumption increased by 39% due to a higher demand on heating with longer periods of cold days in 2021 than in 2020. Other emissions associated with office operations such as waste and water also decreased by 56% and 68% respectively. Our emissions associated with business flights decreased by 49% reflecting the year-long restrictions on overseas travel in 2021 whilst rail increased by 35% due to resumption of domestic travel.

Our energy efficiency initiatives

We recognise that our operations have an environmental impact, and we are committed to monitoring and minimising our emissions year on year. In the period covered by this report, the Company has undertaken the following emissions and energy reduction initiatives:

- Continued replacement of fluorescent strip lighting with LED lighting in our London office.
- Increased use of technology to enable online meetings.

During the year, we also launched an electric vehicle benefit scheme for UK employees, whilst a number of local initiatives which were implemented previously remain in place. These include cycle-to-work schemes and recycling of food waste.

Outlook

As we anticipate a phased return to our offices across the globe, we expect to see an increase in our GHG emissions. That said, the pandemic has accelerated moves towards new, more agile ways of working, enabled by technology and enhanced networks of collaboration and communication. We will seek to embed these alternative ways of working but, as a global company, there will continue to be a need to undertake travel in order to manage our worldwide operations. We are also committed to better understanding our carbon footprint and have commenced work to understand our full scope 3 emissions. Further information will be provided in the 2022 Annual Report.

Methodology

We are reporting our GHG emissions and associated energy use as required by the Companies (Directors' Report) and Limited Liability Partnerships (Energy and Carbon Report) Regulations 2018 (the '2018 Regulations') for our global operations.

We have reported the emission sources for which we have operational control for our global estate for the reporting period 1 January 2021 to 31 December 2021.

Our GHG emissions were calculated in accordance with the requirements of the WRI 'GHG Protocol Corporate Standard (revised version)' and Defra's 'Environmental Reporting Guidelines: Including streamlined energy and carbon reporting guidance' (March 2019). We have applied the appropriate GHG conversion factors from the UK Department for Business, Energy & Industrial Strategy (BEIS) 2021 and International Energy Agency (2021)¹.

We have included in scope all the properties where we are directly responsible for the consumption of energy, including our tenanted offices. Our carbon footprint for the 2021 reporting year was calculated from activity data for scope 1 emission sources and electricity consumption in scope 2. This disclosure builds on the minimum requirements for compliance with the 2018 Regulations to include additional material scope 3 emissions from business travel and office operation (waste, water, paper). Our emissions are presented on both a location and market basis. Location-based reporting applies a country-specific factor to electricity consumption whilst market-based reporting takes account of the specific electricity tariff/supplier used.

¹ This work is partially based on the country-specific CO₂ emission factors developed by the International Energy Agency, © OECD/IEA 2021, but the resulting work has been prepared by Clarkson's and Avieco and does not necessarily reflect the views of the International Energy Agency.



Clarksons' GHG emissions (tCO₂e) and associated energy consumption (MWh) for 2021

	UK 2019 (tCO ₂ e)	Global (excluding UK) 2019 (tCO ₂ e)	UK 2020 (tCO ₂ e)	Global (excluding UK) 2020 (tCO ₂ e)	UK 2021 (tCO ₂ e)	Global (excluding UK) 2021 (tCO ₂ e)	% change in total emissions (vs 2020)
Scope 1	753	424	588	206	759	234	25
Natural gas	220	95	174	44	237	66	39
Other fuels	264	-	222	-	193	40	5
Company cars	204	265	100	159	155	74	-12
Fleet	64	-	47	-	133	-	183
Refrigerants	-	65	45	3	41	54	98
Scope 2 location-based (electricity)	1,005	674	900	574	815	544	-8
Scope 3	352	6,828	171	904	183	479	-38
Total Scope 1 + 2 (location-based)	1,758	1,098	1,488	780	1,574	778	4
Total Scope 1 + 2 + 3 (location-based)	2,110	7,296	1,659	1,684	1,757	1,257	-10
Total Scope 1 + 2 + 3 (market-based)¹			2,042	1,847	1,741	1,211	-24
Total Energy Usage (MWh)			6,382	2,656	7,140	2,637	8
Total global (including UK) Scope 1 + 2 emissions/FTE		1.9		1.4		1.4	0
Total global (Including UK) emissions/FTE		6.5		2.1		1.8	-14

¹ Location-based factors have been applied where there are no residual mix factors available.

Whilst we have endeavoured to obtain accurate and complete data wherever possible, where there were data gaps, we have used reasonable estimations such as annualisation of actual data, use of expenditure data as a proxy and typical office consumption benchmarks.

Supporting our clients

In addition to our commitment to monitor and minimise our own GHG emissions, Clarkson's is also committed to working with our clients to enable smarter, cleaner global trade.

The shipping industry has set ambitious targets for the decarbonisation of the industry itself, whilst decarbonisation of energy sources in wider society is rapidly becoming a higher priority. As a result, many of our clients are embarking on significant change to combat environmental challenges. In response to this, we launched our Green Transition offering in 2021, to provide a consultative approach to finding bespoke solutions for our clients to devise and execute their decarbonisation strategy.

You can read more about the global and shipping trends within which we are working on pages 50 to 55, and how we are working with our clients on their decarbonisation strategies on pages 30 to 49. Further information on the Green Transition can be found on pages 2 to 21.

Task Force on Climate-Related Financial Disclosures ('TCFD')

This is our first year of reporting in line with the TCFD recommendations. The Company complied with the TCFD recommendations during the year ended 31 December 2021, with the exception of the recommendations under the Metrics and Targets pillar where we have provided explanations.

Our approach to the governance and risk management pillars of TCFD is integrated into our wider processes, and our reporting in relation to these areas is therefore set out within the relevant sections of the Annual Report.

Governance

Describe the board's oversight of climate-related risks and opportunities



Read more:
Our governance framework on page 104.

The Board has overall responsibility and accountability for all risks and opportunities, including all climate-related matters. The Audit and Risk Committee monitors the impact of climate change on our principal risks, including their materiality, as part of their ongoing monitoring of actual and emerging business risks.

Describe management's role in assessing and managing climate-related risks and opportunities



Read more:
Our governance framework on page 104.

Our CFO & COO takes overall executive responsibility for ESG matters (including climate change). Our CEO and the Executive Team lead the identification of climate-related opportunities as part of their responsibility for delivering the strategy and identify and manage climate-related risks within their relevant areas.

Strategy

Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term, and their impact on the organisation's business, strategy, and financial planning



Read more:
Climate scenario analysis on page 73.

Whilst the risks and opportunities for our business are identified through existing business planning and risk management processes, we used our first year of TCFD reporting as an opportunity to engage an external sustainability consultant to assist us with a deeper analysis of climate-related risks and opportunities. Further detail on the review undertaken and the risks and opportunities identified through the review are set out on the next page.

Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario



Read more:
Climate scenario analysis on page 73.

We have undertaken climate scenario analysis to understand how the climate-related risks and opportunities that we face may manifest themselves under two different temperature pathways (including one aligned to the Paris Agreement).

Risk Management

Describe the organisation's processes for identifying, assessing and managing climate-related risks and how those processes are integrated into the organisation's overall risk management



Read more:
Our risk management framework on page 89.

Our processes for identifying, assessing and managing the impact of climate change on our principal risks are integrated into our existing risk management processes.

Metrics and Targets

Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process

We have not yet agreed metrics to assess our identified risks and opportunities. These are under consideration and we will provide a further update in future reporting.

Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas emissions, and the related risks



Read more:
Our environmental performance on pages 70 to 75.

Our scope 1, 2 and limited scope 3 emissions are disclosed on page 71. Work to further understand our scope 3 emissions has commenced, with a view to extending our reporting further from the 2022 reporting year. Based on this work, we expect to deepen our understanding of the actions necessary to reach full compliance, and we will provide a further update in the 2022 Annual Report.

Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets

We have not yet agreed targets to manage our identified risks and opportunities. These are under consideration and we will provide a further update in future reporting.



Evaluating climate risks and opportunities

Whilst the risks and opportunities relating to climate change for our business are identified through existing business planning and risk management processes, this year we engaged an external sustainability consultant to assist us with a deeper analysis of this area.

Research was conducted to determine an extensive longlist of transition and physical risks (see below) and opportunities which could affect the shipping industry. These included the introduction of carbon taxes, environmental shipping regulations and security of renewable energy supply. Through a series of workshops with our CFO & COO and business MDs, we considered whether these industry-specific items could impact on the Group and, from those that could, we identified those which were most material to our strategic priorities. The workshops revealed that, due to the nature of our business as a people-based intermediary, transition risks are more material to the Group than physical risks. One risk and two opportunities emerged from these discussions and were assessed in terms of likelihood and impact, in line with our risk management framework. For more details about our risk management framework please see page 89.

Climate change requires thinking that goes beyond typical business planning. As such, the risks and opportunities were assessed from a long-term perspective, in accordance with the climate scenarios described to the right. We have categorised them according to the following timeframes:

- Short: 0-5 years
- Medium: 5-10 years
- Long: more than 10 years

Climate scenario analysis

Scenario analysis is a valuable tool, used to understand how different climate scenarios may impact the Group, given a consistent financial metric. During the year, we worked with our consultant to understand how the climate-related risks and opportunities that we face may manifest themselves under different climate scenarios.

Our Research division collects, validates, analyses, and manages data on merchant shipping and offshore markets. Research has used this intelligence to develop regularly updated climate and energy transition scenarios as it provides an outlook on the way climate change will impact business activity specific to the maritime industry. Using these internally developed maritime-specific climate scenarios rather than generic frameworks enables us to best understand the impacts of different climate scenarios on the unique business environment that shipbroking offers. These scenarios are aligned to the science behind global environmental change highlighted in the latest report by the Intergovernmental Panel on Climate Change. As per the TCFD recommendations, two climate scenarios were considered, including one (Rapid Decarbonisation) aligned to the Paris Agreement.

- **The Gradual Transition scenario** tracks to a moderate overshoot of the Paris Agreement 2°C temperature increase by 2100. In this scenario, CO₂ emissions peak in the late 2020s and then gradually decline through a gradual shift away from fossil fuel use and robust growth in solar, wind and other renewable energy sources, alongside some developments in carbon capture.
- **The Rapid Decarbonisation scenario** is compatible with the goals of the Paris Agreement, and requires steep global annual emissions reductions, sustained for decades, to stay within a 1.5-2°C temperature increase. This scenario is characterised by a rapid decline in fossil fuel use, albeit with gas playing a role as a transition fuel, and an exponential growth of renewable energy production, developments in carbon capture and land use changes.

Climate change risks

Under the TCFD recommendations, climate change risks can be classified into two major categories:

- **Transition risks** – transitioning to a lower-carbon economy may entail extensive policy, legal, technology and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying

levels of financial and reputational risk to organisations.

- **Physical risk** – physical risks resulting from climate change can be event-driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organisations, such as direct damage to assets and indirect impacts from supply chain disruption.

Climate-related risks and opportunities

Our evaluation identified one relevant risk and two relevant opportunities. The potential impact of these risks and opportunities if they were to occur is outlined here, along with our resilience to these risks and opportunities. However, these are not considered to be material to the Group at this time.

Risk

Stakeholder environmental expectations

Timeframe: Short term

Recognising the importance of mitigating climate change, our investors, clients and employees (and in particular our future 'Gen Z' employees) are increasingly aware of the environmental credentials of their investee companies, suppliers and employer respectively. As a result, investors will expect companies to proactively align operations with external environmental frameworks through emission cuts and/or offsetting. We expect this to materialise in the short term, and certainly within the next five years. Stakeholder environmental expectations will continue to develop and grow in the medium and long term as more transparency is required across the value chain.

Mitigation: We are committed to proactively engaging with our investors and clients to understand their environmental expectations. We will collaborate with our key stakeholders to help them achieve the shared objective of reducing their impact on the environment. Our purpose statement and the launch of our Green Transition offering demonstrate to our stakeholders our commitment to be part of the solution through leading and facilitating positive change in the shipping industry.

Furthermore, we understand that transparency surrounding our position in the climate crisis is crucial. We disclose our GHG emissions annually and are aligning our reporting to the recommendations of TCFD. As a business we are committed to supporting our stakeholders by providing the information necessary to contribute to the level of transparency required.

Opportunity

Offshore wind energy

Timeframe: Medium term

To meet both global and national climate targets, including the procurement of clean energy, renewables are expected to become an increasingly vital part of the energy mix. Due to higher and more consistent wind speeds, offshore wind farms can create more electricity than their onshore counterparts, whilst minimising noise and visual pollution and land use competition. Offshore wind energy therefore has the potential to significantly contribute to the decarbonisation of the energy mix. As important players in the financing, brokering and provision of research and port services for specialist vessels, this growing offshore wind energy market presents us with a significant opportunity. Although renewable energy sources are already starting to increase, we expect this to grow further in the medium term, within the next 10 years.

There is significant growth in offshore wind energy capacity and associated farms and turbines in both the Rapid Decarbonisation and Gradual Transition scenarios, with greater growth in the Rapid Decarbonisation case. However, the world continues to heavily rely on non-renewable energy sources, even though renewable sources have seen an uptick in recent years. The infrastructure for facilities such as offshore wind is still being developed and is unlikely to overtake consumption of fossil fuels in the short term (less than five years).

Harnessing this opportunity: We need to be the way-finder for the industry, best able to provide research, advice, strategic guidance, and broking and financial execution services to support the development of offshore wind energy projects. Our renewables team was established around 20 years ago for this very purpose and has enabled us to hold a market leadership position in offshore wind energy intelligence. We will continue to adapt our policies, strategy, and targets to maintain this position, and we will grow and pivot capacity towards offshore renewables brokerage, port services, banking and research.



Trends in offshore wind energy forecasting do not show a uniform distribution around the world; certain areas are likely to grow more strongly, in part due to their geographical configuration. As such, identifying these at an early stage is crucial for us to consequently build our capacity in the relevant geographical areas. Offshore wind energy is a nascent industry for many areas of the world. Our broking and advisory teams are equipped to support these areas in procuring shipping vessels and infrastructure from more established markets, whilst concurrently supporting them in building a strong supply chain locally for future projects.

Moreover, and increasingly after 2030, a share of global annual investment will be required to replace existing or retired capacities with more advanced technologies. Our renewables team will play a crucial role in developing the intelligence required to best support clients in the replacement and retirement of offshore wind energy capacities.

As we evidence our expertise in these areas, we can gain a competitive advantage over those who do not align to a low-carbon future, ensuring we do not lose market share to new entrants to the market. Through the actions outlined above, we believe that we are in a strong position to capture a significant share of this growing market.

Opportunity
Newbuilding fleet renewal

Timeframe: Medium term

Despite the present dominance of oil-powered ships, international commerce and climate change pacts and policies are already starting to impact on the current world fleet and newbuilding order book. Lowering the carbon emissions associated with the shipping industry will require new ships to be built, compatible with clean fuels. As the green transition evolves, older assets will need replacing and chartering strategies will evolve. Further, port and infrastructure investment will be required to accommodate renewed fleet standards. We expect this opportunity to materialise in the medium term, within the next 10 years.



Similar to the offshore wind energy opportunity, whilst the newbuilding fleet renewal opportunity is already providing opportunities for our business, there is potential for this opportunity to grow significantly in both the Gradual Transition and Rapid Decarbonisation scenarios. As policies and regulations in international maritime are still being developed, technology is still evolving, and the vast majority of the existing fleet is powered by conventional fuel, it is unlikely that in the next five years (a short-term horizon) demand for oil-powered ships will become obsolete.

Harnessing this opportunity: To support this growing area of the business, we have invested in our market-leading teams which provide research, ship renewal expertise, advisory services and the execution and financing of alternate-fuelled newbuilding of vessels. We are focusing efforts on building expertise within newbuilding, sale and purchase, and our chartering brokerage. We remain a major tonnage provider to the key global shipbuilding players. As intermediaries, we are well informed on both demand and supply-driven expectations, concerns and strategies. Our aim is to assist and support both shipowners and commodity interests towards the transition to a low carbon economy. As the industry is becoming more complex, our unique level of understanding of the market and regulatory landscape is ever more important to help clients navigate this fast-changing environment. We remain well placed to capitalise on this next phase of shipbuilding fleet renewal as we progress into 2022.

We are committed to closely monitoring the development of latest trends, regulations and technologies which will affect the need for fleet renewal. Environmental regulations are not rolled out uniformly around the world. We will leverage our position as a global company to use our experience in areas where environmental regulations are most stringent to best prepare for the transition in other areas. This opportunity is likely to be most significant in a scenario where the world undergoes an extensive transformation to a low-carbon economy by 2030.