Net zero progress report: year 1

July 2022

Targets and reporting frameworks

In July 2021 the RSC announced that it was joining the UN Race To Zero (RTZ) by adopting a comprehensive net zero target for 2040 and committing to report annually on progress towards a 50% reduction by 2030 from a 2019 baseline. Net zero means that emissions and removals of long-lived greenhouse gas emissions to and from the atmosphere are balanced. Globally, this action is required to halt ongoing warming, with the time required to reach net zero determining the extent of climate change.

Our targets align with the Science Based Targets Initiative (SBTI) 1.5°C path and have been agreed with the Pledge to Net Zero, the UK environment sector programme implementing the UN RTZ developed by the Society for the Environment (SocEnv). These targets are equivalent to a 4.6% linear per annum reduction and cover all sources that are material to total carbon footprint and where data are available, including indirect Scope 3 emissions.[1]

We have also signed up to the UN SDG Publishers Compact in 2021, committing to accelerate progress to achieve the Sustainable Development Goals (SDGs) during the Decade of Action (2020-2030), of which Goal 13 is Climate Action. Signatories aspire to develop sustainable practices and act as champions of the SDGs, publishing books and journals, arranging meetings and other initiatives that will help inform, develop and inspire action in that direction.

This Net Zero Progress Report (NZPR) illustrates our commitment to these goals, our understanding of our climate impact and our early steps on the journey to net zero. It is the first of our annual reports on our climate change impacts and actions to mitigate them.

Use of sinks and credits

Net zero implies the removal of greenhouse gases from the atmosphere to balance emissions. Nature-based solutions to climate change protect and enhance ecological carbon removals, often termed sinks. Projects to chemically sequester carbon dioxide in bulk materials and geological formations are also in development. Offset credits are accounting frameworks to facilitate economic relationships between organisations that cause emissions and those that implement removals.

The RSC will aim to achieve its net zero target without the use of offset credits, taking actions that reduce emissions from our own activities as a priority. We do not intend to purchase offset credits prior to or in respect of our 50% reduction by 2030. Beyond 2030, offset credits may be considered to balance persistent emissions. We will follow the development of carbon removal projects with permanent storage and review this position in future. Where suppliers provide goods or services that include an element of offsetting (e.g. those claiming to be carbon neutral) we will only count them in respect of our targets if they align with the above principles.

[1] The World Resources Institute Greenhouse Gas Protocol (WRI GHG Protocol) categorises greenhouse gas emissions as; Scope 1 direct emissions (such as from natural gas combustion), Scope 2 indirect emissions from energy directly consumed (such as grid electricity), and Scope 3 indirect emissions across an organisation's whole value chain (such as from purchased goods and services).

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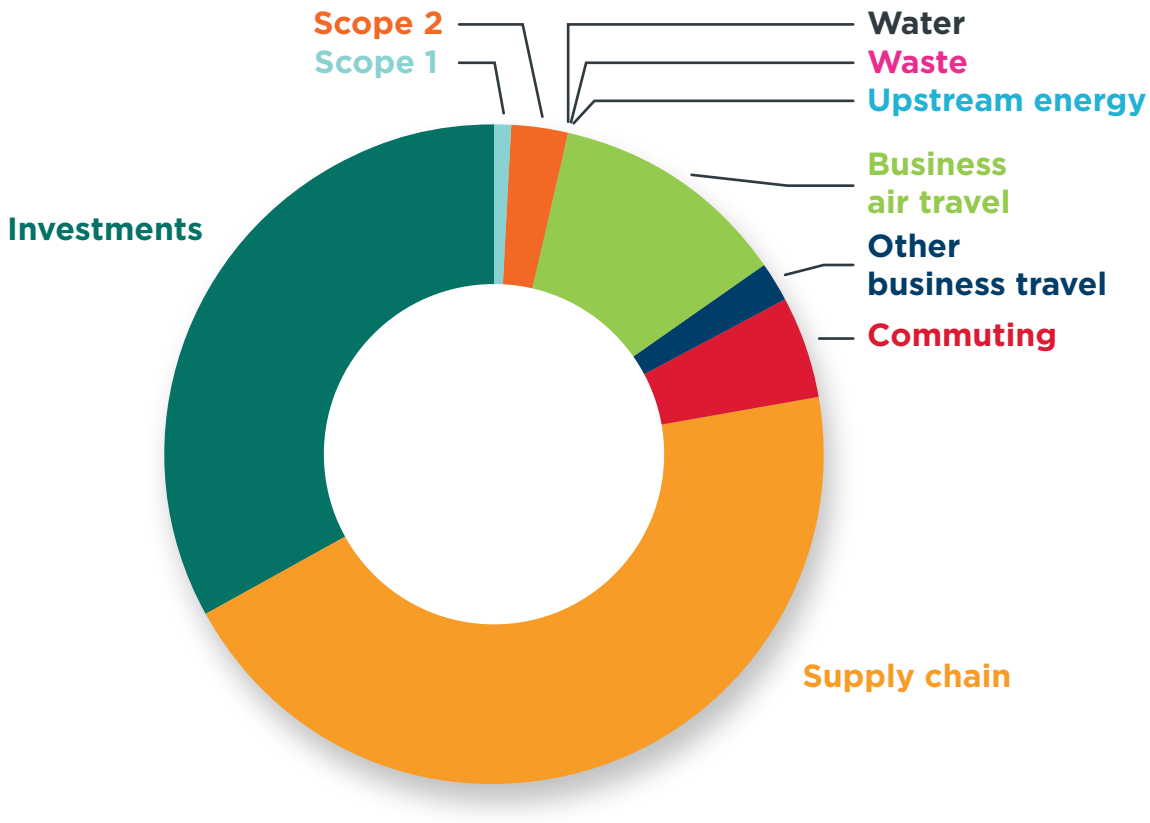
Baseline greenhouse gas emissions inventory

Our baseline greenhouse gas (GHG) emissions inventory for 2019 has been produced according to the World Resources Institute GHG Protocol categories and methods. The RSC boundary includes all staff, offices, commercial activity and supply chain procurement. Member activity is included where it is paid for directly by the RSC such as travel to events.

Scope 1 includes direct emissions from natural gas combustion and fugitive emissions from air conditioning units in our owned and leased buildings. Scope 2 represents indirect emissions from grid electricity consumption, based on billing data and national emissions factors. Scope 3 includes a range of other indirect sources of emissions where we have varying levels of control. Our UN RTZ commitment is to account for all GHG emissions where they are material to our total impact and where data are available.

Data quality varies among Scope 3 categories. It is high for business air travel and upstream energy where we have billed data and reliable emissions factors. However, it has been necessary to use sampled data and sectoral emissions factors for other sources such as commuting, supply chain and investments. Whilst this illustrates the relative scale of these sources and provides a baseline to identify the major sources of emissions from our activity, absolute values should not be relied upon. We are continuing to work with our suppliers, investment managers and other data providers to improve the quality of these estimates.



Progress to date

The table below presents Scope 1 and 2 emissions for 2020 and 2021 in comparison to our baseline year. We are working to improve the data quality of other Scope 3 emissions sources and will report their progress in future years.

	GHG emissions /tCO2e				
Activity type	**2019**	**2020**	*Change against baseline*	**2021**	*Change against baseline*
Stationary combustion	78.6	70.5		83.7	
Fugitive emissions from air-conditioning	11.0	11.0		11.0	
Scope 1 total	**89.6**	**81.4**	*-9%*	**94.7**	*+6%*
Purchased electricity – location based	363	263		199	
Scope 2 total	**363**	**263**	*-27%*	**199**	*-45%*
Scope 1 + 2 total	**452**	**345**	*-24%*	**294**	*-35%*

The COVID-19 pandemic has substantially altered our working lives leading to significant reductions in emissions in 2020 and 2021. Business air travel was low and emissions from energy use in our buildings have fallen by over 30%. We are working to lock in these reduced emissions where we can achieve equally good or better outcomes for the organisation with more sustainable choices.

- **Electricity dominates emissions from our buildings and this source has reduced by over 40% since 2019.** We expect continued reductions as we conclude the move of digital services into the cloud and upgrade lighting in our Cambridge office, Thomas Graham House (TGH), with greater control and more efficient LED fittings. Gas use is up slightly due to reduced heat gain from office equipment and increased ventilation. The emissions intensity of grid electricity is also likely to fall in coming years as renewable generation continues to grow.
- **Our new travel policy released in March 2022 explicitly requires travellers to consider the impact of their travel choices.** The RSC is a dynamic and global organisation and, therefore, travel will always be required. But we want our staff to travel less, travel smart and travel well. Video conferencing and remote participation will be key tools, but so too will choosing lower carbon options such as fewer travellers, rail where feasible and direct flights.
- **We have installed updated remote participation facilities,** developed through our Future Workplace pilot, such as virtual communication booths and Teams Rooms to maximise productivity and reduce the need to travel.
- **Electric vehicle charging points** have been commissioned for TGH to supplement those recently installed on the Science Park. Personal car travel is the largest source of commuter emissions so we will continue to support the uptake of public transport, walking and cycling.
- **Procurement of goods and services is the largest element of our carbon footprint, we have been gathering baseline data however this data needs improvement.** We are working with suppliers to gather data specific to the RSC which will feed into future development of responsible procurement policies.
- **With our investment managers we have estimated the carbon impact associated with the RSC reserves in our globally diversified investment portfolio.** However, some components of the portfolio (alternative assets) are currently difficult to analyse so approximations have been made. Investment policy was amended in 2020 to require the RSC to consider environmental and social impacts. The Finance Resources Board scrutinises carbon footprint and other social impacts of equity & fixed income investments on an ongoing basis.

Next steps

We are taking specific actions to put the RSC on the path to net zero across the major sources of emissions:

- **Additional solar PV panels** are being commissioned for TGH to complement the existing 50 kWp array. This will reduce our exposure to volatile and rising electricity prices and ensure low carbon supply.
- **We are making plans to replace the gas used for heating and cooking in Burlington House (BH).** A building consultant has been engaged to identify and cost suitable alternatives, such as air source heat pumps and induction hobs, and options to reduce our demand for energy.
- **Hybrid working will reduce emissions from commuting but presents the risk of increasing home energy consumption.** We will present quantitative data on the impact of this shift in future and help staff to make the best choices for themselves and the planet.
- **We will continue to identify the major elements of our carbon footprint in our supply chain and take steps to improve sustainability.** Responsible procurement policies are to be developed as required to support our procurement activities.
- **Investments.** Our planned investment retender, in 2023, will require bids to include plans for carbon reporting and explanations as to how they will help the portfolio transition to net zero. Findings from the retender process are to be incorporated into our investment policy as required to support RSC commitments.