

Brunel's response to DLUHC's 'Governance and reporting of climate change risks' consultation

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Executive Summary

Brunel are strongly supportive of the overall spirit of the requirements set out in DLUHC's consultation. We believe this is a necessary and positive step in the right direction for LGPS pension funds. Both the LGPS' and their Pools' have an important role in the UK-wide initiative of producing a net-zero economy by 2050 and these proposals will be an important step in making progress against this target.

We encourage DLUHC to consider the potential for unintended consequences of some of their requirements. We specifically highlight the target and metric calculations and monitoring. Brunel strongly support the overall requirement for firms to disclose TCFD aligned metrics and targets. However, we are concerned that the language around target setting and monitoring could potentially encourage short-termism that is counterproductive to the overall long-term goals of the TCFD recommendations. We believe that annual assessments of performance against single metrics, especially regarding absolute and footprint emissions, alongside the potential encouragement of changing targets based off this annual assessment could encourage counterproductive behaviour.

The UK government's target of achieving net-zero greenhouse gas emissions by 2050 will require change within various industries and sectors with business plans and strategies currently unaligned to this target. In order to achieve these changes, investments in certain carbon intensive sectors may produce metrics that show a poor consideration of carbon emissions; yet over the long-term may provide enhanced alignment to climate-related targets that would not appear through annual assessments and short-term targets.

The decarbonisation of a portfolio is not likely to be the route to decarbonising an economy; metric and target setting requirements should therefore be made with these considerations.

It is important to note that a significant amount of development within the UK and globally is necessary to provide sufficient quality and quantity of data on which these disclosures depend. Furthermore, there are several methodological gaps which will need to be addressed to provide decision-useful information within the reports, especially in private market investments. Closing these gaps will take high levels of specialist expertise, time and considerable financial resources. There is a need to be highly prudent when sourcing external advice and allocating resources to ensure that they are being spent in areas that will provide the highest benefit to stakeholders. We believe that DLUHC has a role in achieving this through offering supplemental support and guidance, flexibility in the scope of the requirements especially around the aggregation of reporting and target setting, alongside promoting consistency across all LGPS reports.

We also encourage DLUHC to consider the scope of the requirements as they relate to AA and Scheme level reports. We believe that the current methodologies and tools needed to be used to report on scenario analysis, metrics and targets at an AA level are not sophisticated enough to produce consistently meaningful data.

Creating metric and target reports at a scheme level is the one requirement that Brunel does not support.

We believe that the quality of data is more important than the quantity in producing decision-useful information. We would therefore encourage DLUHC to direct the LGPS' towards dedicating resources to enhancing their governance, risk management and strategy, with relation to climate risk. These are the areas that will yield the strongest alignment with TCFD recommendations and will be the best use of resources in the short and medium-term, while the wider international business sector adapts to increased demands for climate reporting in the long term.

We also encourage increased consistency around scenario analysis, as results from the same defined scenario can yield very different results. Brunel would encourage DLUHC to request analysis against one or two organisationally defined scenarios, such as the widely used scenarios produced by the Network for Greening the Financial System (NGFS), which would provide consistency and comparability between disclosures.

We believe that the consultation's inclusion of the role of pools is a highly positive inclusion, and Brunel agree that pools will have a large role to play in the individual funds and schemes meeting their TCFD reporting obligations.

We finally encourage DLUHC to highlight the value of funds assessing metrics and targets as they relate to climate-related opportunities. The 2017 TCFD report and supplemental annexes strive to highlight the opportunities for companies and therefore asset managers that relate to climate change. It would therefore be encouraging for LGPS AA's to also identify, where prudent, metrics and targets that could provide long-term benefits to the funds' and its members, rather than purely risk mitigation.

This consultation response has been reviewed by our client group. Our response has been maintained at a high-level for clarity and breadth. However, the considerations behind our response have been formed through our, and our client's collective experience. For example, our 2022 Climate Metric report has been based on 3 years of working alongside our clients to provide the clearest and most decision-useful information we can. Should you wish for additional detail or explanation behind our response, we would welcome additional dialogue. Our main points of contact for this would be Faith Ward, Chief Responsible Investment Officer (CRIO): Faith.Ward@brunelpp.org or Katherine Farrell, Head of Operational Risk and Compliance Katherine.Farrell@brunelpp.org.

Question 1: Do you agree with our proposed requirements in relation to governance?

Summary of Proposals:

1. AA's Scheme Manager (often a pension committee) will be considered broadly equivalent to 'the board' in relation to TCFD Governance recommendations.
2. In relevant scenarios, external advisors, officers, or delegates such as an officer or a pool, all have important roles in helping AAs integrate climate risks into governance processes
3. No legal duties will be placed on individuals; however, AAs will have duties to:
 - a. Oversee climate related risks and opportunities
 - b. Establish ongoing processes to satisfy themselves that parties involved with climate-related governance are effective.

Brunel's Response:

Brunel agrees with the proposed guidance in relation to governance.

Brunel believes that the TCFD governance recommendations will align well to the established structure of LGPS'. We are hoping for a seamless transition of the recommendations into these existing frameworks.

We are supportive of the comments in the governance section, but also throughout the consultation on the role of pools in implementing TCFD disclosures and that it should be a collaborative endeavour. We believe that pools will be critical to LGPS' ability to produce their reports in a consistent and comparable way.

In our own experience of developing our climate change policy, we identified that knowledge across the financial services industry in relation to climate reporting and risk management was limited. LGPS' will need specialist support from experts, and we should remain cognisant that existing expertise and methodologies may not be sufficient in managing the topics addressed in the TCFD disclosures. For example, climate scenario analysis is a very specialist field and is unlikely to be within the current skill set of LGPS' actuaries.

Furthermore, we highlight that we have embedded our commitment to net zero by 2050 into our Senior managers and Certification Regime ([SMCR](#)) process, for example integrating all but one certified senior management function's statements of responsibility with a responsibility to direct Brunel in an effective way to achieve this target. We would recommend supporting guidance to show this as an element of best practice to help encourage further embedding of climate risk and opportunity management throughout AA's governance.

Question 2: Do you agree with our proposed requirements in relation to strategy?

Summary of Proposals:

1. AA'S will have the following additional duties to:
 - a. Identify, on an ongoing basis, climate-related risks and opportunities that will impact the investment and funding strategy of the AA, over the short, medium and long term – including carbon pricing, new technology adoption, extreme weather events.
 - b. Assess, on an ongoing basis, the impact of the identified risks and opportunities on the AA's investment and funding strategy – considering risk materiality, liquidity and time-horizons of the assets, alongside cashflow and liabilities of the fund.

Brunel's Response:

Brunel agree with the overall proposed requirements in relation to strategy.

Although there is a lot of supplemental guidance on incorporating climate risk and opportunities into business/investment strategies, we expect understanding to evolve over time. We emphasise the importance of AA's incorporating physical risks into assessing the resilience and adaptability of their investment strategies. We believe that the prominence of physical risks in investment strategies is currently underdeveloped. We support the inclusion of future carbon-related factors on strategic decisions; however, we believe increased narrative around physical risks associated the climate change that has already taken place is essential.

We recommend that the time and resources put into statutory guidance to assist AAs should be particularly focused on strategy. Brunel believes that additional guidance for AAs regarding strategy will be a key factor in the ability to achieve the targets set, without requiring further regulatory requirements.

Question 3: Do you agree with our suggested requirements in relation to scenario analysis?

Summary of Proposals:

1. AAs to integrate climate 'scenario analysis' of at least two scenarios regarding their overall investment and funding strategies.
2. One scenario must be 'below 2°C temperature rise scenario' to emphasise increased shorter- term transitional risks.
3. Scenario analysis should be conducted triennially alongside the valuation cycle. Every year AAs should consider if new scenario analysis is needed.

Brunel's Response:

Brunel agrees and supports the use of scenario analysis in incorporating climate related risks and opportunities into investment strategies.

We raise the challenges that are associated with scenario analysis. In our experience, we have incurred considerable costs in collecting the necessary data for scenario analysis on listed markets, not including the costs of conducting the scenario analysis itself. We anticipate the cost to collate and utilise the necessary data to produce decision-useful scenario analysis on private markets to be considerably higher. The FCA's cost-benefit analysis (as shown in [CP21/17 Annex 2](#)) would be a good reference point for further detail on costs. The LGPS' would be comparable to small-mid level asset managers. We specifically raise that the costs associated with creating decision-useful information relates to the limited number and service of data providers. In other words, even if data is accessible, there can often be considerable amounts of manual manipulation and aggregation required to leverage the data to create meaningful scenario analysis and metrics. These will require additional outsourcing, or internal labour costs, so that the scenarios and metrics can be created, assessed and altered to maintain their accuracy and validity.

Financial costs notwithstanding, the outcomes of scenario analyses are very subjective and subject to methodological flaws and gaps in aggregating and applying data. We believe that scenario analysis should be concentrated in the investment areas where the data is most robust, for example listed markets; therefore, we recommend that requirements provide flexibility in scope.

We also encourage the requirements to relate to one or two specific organisationally approved scenarios. We believe requirements for scenario analysis based purely on numerical temperature scenarios are not sufficient to produce comparable disclosures; different outcomes can easily be produced through methodological differences when conducting analysis on a scenario with *prescribed* assumptions. We therefore recommend using the Central Banks and supervisors Network for Greening the Financial system (NGFS) scenarios used by central banks.

We believe our recommendations will not only enhance the decision-useful results from scenario analyses but will also produce more credible and consistent results across LGPS' and allow for resources to be allocated where they provide the most decision-useful information.

We strongly support connecting scenario analysis requirements to triennial evaluation cycles as part of existing governance requirements. However, we request that additional flexibility is given for the first published reports. LGPS' triennial evaluations have taken place in March 2022, awaiting results. The next evaluation will be 2025. Given the deadline to publish the first report is December 2024, this will require additional scenario analysis within a shorter period. We therefore invite DLUHC to take these schedules into consideration as they relate to scenario analysis requirements.

We support the requirements to annually assess the relevancy and accuracy of the analysis; we emphasise that the level and scope of assessment should be proportionate to the materiality of changes in the investment strategy and relevant external factors. To help prevent the risk of greenwashing, we recommend that the requirements and guidance encourage scenario-analysis changes to be an exception, rather than a routine; helping to provide longer-term decision useful information.

Question 4: Do you agree with our proposed requirements in relation to risk management?

Summary of Proposals:

1. Establish and maintain processes for the purpose of enabling them to identify and assess climate-related risks.
2. Establish and maintain processes for the purpose of enabling them to effectively manage climate-related risks.
3. Ensure, on an ongoing basis, climate-related risk management processes are integrated into their overall risk management.

Brunel's Response:

Brunel agrees with the proposed requirements in relation to risk management:

We particularly highlight the importance of firms embedding climate risk into their risk register and in each relevant level of their risk taxonomies. It is important that climate risk is considered at a level of granularity which can be monitored on an ongoing basis to give the best possible insight to be managed effectively. Brunel also encourages the consideration that not all pools will be FCA regulated, therefore may have different levels of risk management; the relationship between pools and individual funds with regard to embedding effective climate risk management may vary, and we encourage that this consideration is maintained in the guidance.

Question 5: Do you agree with our proposed requirements in relation to metrics?

Summary of Proposals:

1. AAs must calculate the following metrics:
 1. Metric 1 (absolute emissions metric) - total carbon emissions, which includes Scope 1, 2 and 3 emissions reported separately, as well as the sum of the three – at entire fund level (all investments)
 2. Metric 2 (emissions intensity metric) - carbon footprint. This is carbon emissions divided by the total assets of the fund to which the data relates. It should be calculated separately for Scope 1, Scope 2 and Scope 3 emissions – at fund level
 3. Metric 3 (data quality metric) – the percentage of assets for which Scope 1, 2 and 3 emissions are verified, reported, estimated or unavailable, in line with the GHG Protocol – at fund level.

- Metric 4 (Paris Alignment Metric) – the percentage of the fund's assets for which a public Paris aligned commitment has been made, i.e., net zero by 2050 – at fund level.

Brunel's Response:

Brunel agrees with the proposals to use metrics in their disclosures, and broadly agree with the approach by which they are calculated:

Brunel agrees with the approach to use absolute carbon emissions, carbon footprint (or alternatively, weighted average carbon intensity (WACI)) and data quality metrics. We are supportive of the ambition to include scope 3 emissions. However, we raise the methodological challenges involved in calculating the proposed metrics for scope 3 emissions, with particular emphasis on aggregating scope 1,2 and 3 total carbon emissions into a single fund-level figure. Given the complexities involved and the methodological challenges, we believe that the quality of this aggregation may limit its ability to provide meaningful decision-useful information. The risk of double or triple accounting, especially as they relate to upstream and downstream emissions across a fund poses a high risk of inaccuracy in emission scope aggregation.

We recommend that scope 3 emissions are presented separately, potentially with further disaggregation showing upstream and downstream emissions.

We extend this by highlighting the methodological challenges associated with requiring each metric to be presented at an aggregated fund-level figure. We do not currently believe there is a credible methodology to aggregate these metrics at this level, and therefore highlight that the requirements may not allow the AAs to produce metrics that are comparable and decision useful.

This is particularly true of some of the Paris-alignment metrics, with emphasis on Implied Temperature Rise (ITR). Though we support the ambitious requirements for a Paris-aligned metric, given the methodological issues and the resources required to produce credible data, we propose that the requirements should give flexibility for AAs to focus on the areas of their funds and investments which have the highest material impact on their alignment. This focus will ease the burden of data analysis as typically these high impact holdings are more likely to have accurate and comprehensive data on their climate impact, and therefore will facilitate the usage of resources to produce the most meaningful and decision-useful information. For example, Brunel is looking to set a target relating to alignment in high impact sectors but articulate a wider ambition with respect to the wider market. We believe this focus will enable us to have greater impact on reducing climate risks, rather than trying to gather data on holdings which are less material in relation to climate impact.

We therefore encourage DLUHC to consider the Net-zero investment framework (NZIF) implementation guide, produced by the Institutional Investors Group on Climate Change (IIGCC). This framework is the leading standard for investors to commit to net-zero targets and provides a range of metrics specific to asset classifications to measure alignment.

We have strong reservations on the use of implied temperature rise (ITR) models, as we do not believe that these methodologies will provide meaningful and decision-useful figures. We have attached as an appendix to our response a letter sent by the Transition Pathway initiative (TPI) on the 15th of July 2021.

This letter was signed by Faith Ward, CRIO at Brunel, and was written in response to the TCFD Forward-Looking Financial Sector Metrics consultation. Please see page 2 and 6 specifically for concerns regarding the Implied Temperature Rise model for calculating fund alignment.

We support the data quality metric and Brunel and its client partners have been reporting on this in relation to scope 1 data for some time. We ask that the requirement for the data quality metric is framed such as to allow the use comparable 'phrases' used by data providers as not to require bespoke data (and by extension increased costs) for the LGPS'. For example, Brunel currently used full, partial, modelled data, to this it would be easy to add unavailable.

The table below summarises the discrepancies between our current data quality terminology and DLUHC's proposed data quality terminology.

LGPS	Brunel (S&P Trucost methodology)	Notes
Verified	Full	Verification is via the CDP
Reported	Partial	This where reported data on a relevant metrics is used to extrapolate carbon data.
Estimated	Modelled	Use S&P modelling assumptions
Unavailable	We report the percentage coverage e.g., 97%, therefore 3% is unavailable	

We encourage DLUHC to provide further guidance and support for LGPS' on using additional metrics, especially as they relate to climate opportunities. Brunel is working on metrics relating to sustainable investment exposure using data such as FTSE Green revenues. This allows us to measure the exposure of the assets in a portfolio to revenue from products and services that deliver environmental solutions. We believe facilitating wider use of opportunity-based metrics will align the guidance closer to the TCFD recommendations. We also encourage DLUHC to sign-post market standard guidance for AA's in making decisions on what data is of sufficient quality to be aggregated and published, alongside guidance on approaches to partial disclosure based on those decisions.

Question 6: Do you agree with our proposed requirements in relation to targets?

Summary of Proposals:

1. AAs must set a target for their fund in relation to one of the metrics which they have selected. The target may be in relation to one of the mandatory metrics (absolute emissions, emissions intensity, data quality or Paris alignment), or any other climate-related metric endorsed by the TCFD which the AA chooses.

2. AAs must annually measure, as far as they are able, the performance of their fund against the target they have set and considering that performance, determine whether the target should be retained or replaced.
3. There is no expectation that AAs should set targets which require them to divest or invest in a given way, and the targets are not legally binding.

Brunel's Response:

Brunel agrees with the requirement for AAs to set targets against metrics:

However, we strongly suggest that further consideration is taken to the language of the guidance and requirements regarding annual monitoring of performance against the targets.

We believe that requiring annual consideration to changing targets may encourage behaviours that promote short-term climate-related performance that may not achieve the overarching goals of net-zero by 2050. For example, targets to decarbonise a portfolio in the span of a year may involve a strategy of divestiture in industries, markets and sectors that will be essential in transforming the UK economy to net-zero by 2050.

Investors have a crucial role to play in steering various sectors in the listed, and especially private markets towards achieving overarching climate targets in the long run, which may not appear prudent through decarbonising focused metrics and targets in the short-term. This is highlighted in our global-sustainable portfolio, which has appointed managers to target investments in companies who are at the forefront of the energy and industrial transition to Net Zero. Against the TCFD's recommended Weighted Average Carbon Intensity metric, this portfolio has seen a 61.8% increase in carbon intensity from last year. However, using a FTSE Green revenue metric, the portfolio had 10.9% of exposure to green revenues compared to 8.5% in its benchmark, the FTSE All-world as of 31 December 2021.

The setting of relatively short-term targets may produce unexpected and perverse outcomes. For this reason, we would encourage enhanced flexibility and wider scope on target setting, that promotes long-term adaptability and flexible assessment. Brunel highlights that we believe that the pathway to carbon neutral by 2050 may be bumpy, and that an investment solution that fails to meet a target assessed on an annual basis, provided there is sufficient narrative around the thought process and prudence of the targets, may still be the best pathway to achieve long-term objectives aligned to TCFD recommendations. It is important to remember that as LGPS' must manage its approach to climate risk with considerations outside of what can be measured.

Question 7: Do you agree with our approach to reporting?

Summary of Proposals:

1. Annual climate risk report to be produced by AA's alongside or within their annual report – starting December 2024 – this should be easily made available for members of the public online.

2. Report must be accessible for non-specialist readers but also contain enough detail for industry experts.
3. Narrative must be produced alongside metric when assessing metrics

Brunel's Response:

Brunel agrees with the overall approach to reporting requirements:

We suggest that particular emphasis may want to be given in guidance around the terminology used for data categories (verified, reported, estimated or unavailable). We believe that this may be a potential source of confusion, especially as they relate to data aggregation and explanations within the climate risk reports. We would encourage guidance to highlight that data providers may use different terminology to describe the same category, and that AAs should not be discouraged from using certain providers based on terminology discrepancies alone.

None the less, Brunel highlights that differences in terminology should be considered when aggregating data, they should be explained clearly in reports where necessary, and consistent language within reports should be used to provide utmost clarity and comparability across reports.

Question 8: Do you agree with our proposals on the Scheme Climate Risk Report?

Summary of Proposals:

1. Scheme Annual climate risk report – to be produced by Scheme Advisory Boards for the entire scheme
2. Schemes should report on all metrics at an aggregated scheme level – aggregating each relevant AA metrics together.
3. Invites views regarding if individual AA metrics should be disclosed in the scheme reports
4. Scenario analysis will not be required at scheme level.

Brunel's Response:

Brunel does not support some the proposed requirements around a scheme-level report:

Brunel believes that current methodologies are not sophisticated and developed enough to produce meaningful data at a scheme level. As such we do not believe that the resources and time required to produce such a report would constitute prudent allocation, as the aggregated figures would not be accurate enough to produce meaningful and decision-useful information.

Though we are not opposed to a high-level scheme-wide report, Brunel strongly suggests that a dashboard approach to assessing overall metrics and targets would be more effective in assessing overall scheme-level climate risk and opportunity assessments.

Furthermore, climate metrics would be reflective of the particular weighting of asset-allocations, rather than overall effectiveness and comprehensiveness of AA strategies with regard to governance and climate-related risk management. As such, we do not believe aggregating numerical metrics across the scheme shall not provide an overall assessment of LGPS' contribution to the targets of net-zero greenhouse gas emissions by 2050.

A scheme-level report which is based more on an overarching dashboard and narrative around the constituent funds strategies, risk management and governance, rather than an aggregation of metrics into a single numerical value would create more decision- useful information. However, we stress that any scheme dashboard, or other comparative methodologies should not unfairly compare funds. We believe that there is a reputational risk for pension funds in uncontextualized scheme level comparative reporting. High levels of care should be taken in requiring each AA report to be included, and if comparison is given, these need to be appropriately contextualised to mitigate unfair reputational harm. Uncontextualized comparisons at a scheme level may also exacerbate any short-termism risk from target setting and may further encourage divestiture strategies rather than longer term engagement and stewardship-focused strategies.

Question 9: Do you have any comments on the role of the LGPS asset pools in delivering the requirements?

Summary of Proposals:

1. For pooled assets, the pools are expected to be able to provide data, calculate metrics and carry out scenario analysis on these assets where that data is available
2. DLUHC expects that coordination and delivery from pools regarding data of AAs assets will be increased as more assets are pooled, and as increased efforts are made by pools and AAs to align their transition and targets regarding climate-related risks.

Brunel's Response:

Brunel supports the consultations explanation of the role of pools in delivering these requirements.

We believe that pools will have a very important role to play in facilitating the production of LGPS' climate reports. We believe that within Brunel, and FCA regulated pools in particular, there is a high level of risk management, SME knowledge and reporting capabilities that, with collaboration and engagement can spread the burden for LGPS funds, so long as sufficient resources are allocated appropriately to facilitate this support.

We highlight that different pools have different structures; in particular, not all Pools are FCA regulated, therefore the relationship between the AAs and pools may alter the ways in which they can support each constituent AA. We also raise that funds will have varying amounts of assets pooled, therefore the ability for pools to support their funds may also vary.

Furthermore, due to the financial resources required to produce such reports, we encourage the requirements relating to scenario analysis use one or two organisationally- defined scenarios, to provide additional consistency, which in turn will support the coordination of pools and their respective LGPS funds.

Question 10: Do you agree with our proposed approach to guidance?

Summary of Proposals:

1. DLUHC intends to provide high- level statutory guidance to accompany changes to regulations
2. The SAB will also be asked to produce a standard template which AAs will be required to follow in producing their climate risk report

Brunel's Response:

Brunel strongly agrees with the proposal for DLUHC to produce statutory guidance:

Brunel however encourage an exercise of caution in producing a template for AA schemes to use. Though we agree that consistency is an important factor for stakeholders, we emphasise the potential risk of a 'one-size fits all' approach to climate reporting. We believe that funds should have flexibility in their ability to approach their disclosures as the narrative that is required to put the metrics and targets in the correct context is what will make the disclosures particularly useful to stakeholders.

We believe requirements should provide flexibility for funds to go beyond the requirements in their disclosures. If templates are to be used, we stress the importance of further collaboration between DLUHC and LGPS funds and pools to ensure that they can cater for varying structures, business models and operations. This we believe to be also important for a scheme-level dashboard. Brunel has worked with our clients on developing a template. We have added one of our client's climate report to provide a supporting example of a report layout we believe is clear and therefore decision useful.

Question 11: Do you agree with our proposed approach to knowledge, skills and advice?

Summary of Proposals:

1. AAs must take proper advice regarding assessing and managing climate risks.
2. AAs will need to satisfy themselves that the advice is high quality and provided by appropriately qualified people
3. Pools could jointly procure expert advice for their partner funds.

Brunel's Response:

Brunel agrees with the proposed approach to knowledge, skills and advice:

We highlight that enhancement of technical methodologies, alongside knowledge and skills will be necessary throughout the economy. This shall also be true of the relevant regulators' and supervisory bodies, including DLUHC in producing requirements that remain adaptable and up to date with national and international developments. This will be essential to support the steering of the UK economy towards producing effective climate strategies and disclosures to achieve the net-zero by 2050 goal.

Question 12: Do you have any comments on the impact of our proposals on protected groups and on how any negative impacts may be mitigated?

Summary of Proposals:

1. DLUHC do not believe there would be impacts on protected groups from the proposals in this consultation, as they do not affect member contributions or benefits.
2. AA and SAB reports must be compliant with the public sector equality duty – reports must be in accessible format.

Brunel's Response:

Brunel agrees that all climate-related reporting must be compliant with the public sector equality duty:

Brunel highlights the earlier point regarding unintended consequences around target setting. We believe that DLUHC should be cautious in producing requirements around metrics and targets, to ensure that they don't encourage investment strategies that would disproportionately affect marginalised groups and less economically developed countries and regions, alongside impeding levelling-up across the UK.

For example, a narrow focus on targets could encourage asset allocations that avoid private market investment in real-estate development, or emerging markets which may have disproportionate consequences for individual groups in society. We therefore encourage DLUHC to consider further the potential for unintended consequences more broadly, but also in relation to disproportionate and adverse impact on groups within society.

We particularly emphasise the need for consideration of 'Just transition' in DLUHC's requirements and guidance. Brunel firmly believes transition plans and investment strategies to achieve climate-related targets need to consider consequences on various higher-risk groups; both to mitigate risk and find additional opportunities.

Appendix

Summary of Brunel's Risk management approach to Climate Change:

The Brunel Board approves and is collectively accountable for Brunel's Climate Change Strategy and Policy. Day-to-day operational accountability sits with the Chief Responsible Investment Officer, with oversight from the Brunel Investment Committee and Brunel's Board. Climate risk has been identified as a principal (level 1) strategic risk to Brunel. As such, the risk is owned by the Chief Executive Officer, with oversight from Brunel's Audit, Risk and Compliance Committee and forms part of Brunel's overall strategic risk framework.

Climate risk, key performance and risk indicators are integrated into our Brunel Investment Risk Committee and Brunel Investment Committee reports and agendas.

15th July 2021

Dear Sir/Madam,

Re: TPI Response to the TCFD Forward-Looking Financial Sector Metrics Consultation

We are responding to your consultation on two documents: *Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans* and the associated *Measuring Portfolio Alignment: Technical Supplement*. We do so as Asset Owner members of the Transition Pathway Initiative (TPI) an initiative we established as asset owners to serve the needs of asset owners in understanding the transition to a low carbon economy aligned to the Goals of the Paris Agreement.

Please note that a more detailed technical submission will be made by the TPI technical team to the technical aspects of the consultation. This letter focuses on the concerns of asset owners regarding TCFD's proposals on portfolio assessment and portfolio alignment¹.

The Transition Pathway Initiative has been a long-standing supporter of TCFD and of initiatives that support TCFD (e.g. Climate Action 100+). We recognise the important role that TCFD has played in framing and driving corporate and investor climate change disclosures and in putting climate change on the agenda for company and investor leadership teams. We also see that TCFD has now achieved the status of a *de facto* standard-setting body on climate-related disclosures; that is, if TCFD recommends disclosure of an indicator or other information, that recommendation is treated in a similar manner to a disclosure request from a regulatory agency.

In preparing this submission, we have consulted extensively with other asset owners, we have carefully reviewed the two consultation documents and we have had a detailed discussion with the TCFD Team and other members of the COP26 Private Finance Hub.

Our conclusion from those discussions can be summarised as follows:

- There remain significant gaps and technical weaknesses in the two consultation documents which mean that the recommendations in the report relating to portfolio

¹ We also wish to note that we agree with many of the specific elements of the consultation. For example, we welcome the proposals to develop a specific list of climate metrics and targets which are essential to enable the climate transition (the TPI technical submission provides further commentary on this point), the emphasis on climate opportunities as well as risks, and the focus on decarbonisation strategies.

assessment and portfolio alignment are not supported by the information presented in the reports. We also note the similar concerns expressed by the Bank of England in its May 2021 paper: *Options for greening the Bank of England's Corporate Bond Purchase Scheme*².

- We disagree with the positioning of implied temperature rise as a more sophisticated – and, in turn, more relevant - metric. We acknowledge that calculating implied temperature rise is a complex calculation than other methods presented, but this does not mean that it is a more robust or decision-useful measure.
- The adoption of portfolio alignment metrics will have a series of undesirable consequences for asset owners potentially forcing them to breach their fiduciary duties, imposing significant additional costs on asset owners. We remain concerned that the TCFD's proposals seem to have been developed without consideration of the feasibility and cost versus the benefits for pension funds or asset owners. We see the attraction of the TCFD's proposals for fund managers looking to develop and market green products, but do not see the same benefit for asset owners that have very different duties, interests and responsibilities.
- Our most fundamental concern remains that the TCFD's proposals will drive decisions that could undermine wider efforts to transition to a low carbon economy. In particular, the implied temperature metric has the potential to create wide misunderstanding and to drive the carbon washing of portfolios. It would become increasingly difficult to hold a portfolio of transitioning assets in high carbon intensive sectors, even if those very same companies had been responsive to investor engagement and made credible and independently verified net zero aligned targets that were consistent with the transition. Given that these are the companies and assets we need to transition, such an outcome seems perverse and, presumably, not the intention of the TCFD's proposals.

In order to support asset owners as effectively as possible we have offered to work with TCFD to map out the steps that need to be taken to develop an implied temperature metric, to define the data needed to construct such metrics and to understand how these metrics might be used in investment decision-making. We think that this work will provide the robust foundations needed to support the development of robust portfolio alignment metrics and address the concerns we have outlined.

² See <https://www.bankofengland.co.uk/-/media/boe/files/paper/2021/options-for-greening-the-bank-of-englands-corporate-bond-purchase-scheme-discussion-paper.pdf?la=en&hash=9BEA669AD3EC4B12D000B30078E4BE8ABD2CC5C1>

Below, we set out our views in more detail, providing:

- A brief overview of the Transition Pathway Initiative's (TPI's) experience in this area and of our current and future priorities.
- Our general views on the state of play on portfolio alignment metrics.
- Our views on the two TCFD reports.
- A summary of how we might make progress.

We trust that you will find these comments and proposals helpful. We look forward to hearing from you.

Yours sincerely,



Adam C.T. Matthews
Chair
Transition Pathway Initiative (TPI) &
The Church of England Pensions Board



Faith Ward
Member TPI Steering Committee &
Brunel Pension Partnership



David Russell
Member of TPI Steering Committee &
USS



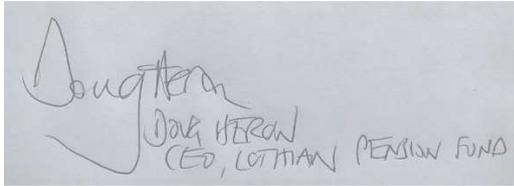
Bess Joffe
Member of TPI Steering Committee &
Church Commissioners for England



Chandra Gopinathan
Member of TPI Steering Committee
RPMI – Railpen



Rachel Ewell
TPI Asset Owner Member
Border to Coast Pensions Partnership



Doug Heron
Doug HERON
CEO, LOTHIAN PENSION FUND

Doug Heron
Asset Owner TPI Supporter
Lothian Pension Fund



Victoria Barron
Asset Owner TPI Supporter
BT Pension Scheme Management Ltd

1. Background: The Transition Pathway Initiative and portfolio alignment metrics

The Transition Pathway Initiative (TPI) is a global initiative led by Asset Owners and supported by Asset Managers. Established in January 2017, TPI now has 105 investor supporters with over \$29 trillion combined Assets under Management and Advice. TPI's supporters have committed to using the tool and its data in a range of ways, including to inform their investment research, in engagement with companies and in tracking managers' holdings.

Using publicly disclosed data, TPI assesses the progress that companies are making on the transition to a low-carbon economy, supporting efforts to mitigate climate change. The TPI is in line with the recommendations of TCFD and provides data for the Climate Action 100+ initiative. All TPI data are published via an open-access online tool: www.transitionpathwayinitiative.org

TPI has – with its supporters and in partnership with various investor initiatives– pioneered, and continues to pioneer, the development of portfolio assessment and portfolio alignment tools. In partnership with our research partner (the Grantham Institute at the London School of Economics) and our data partner (FTSE Russell), these include the development of:

- Carbon performance assessment tools, using the sector decarbonisation approach, for a range of high impact sectors including electricity, oil and gas, mining, transport, steel, food and chemicals.
- Net zero standards for the oil and gas sector (forthcoming, July 2021) and for the diversified mining sector (forthcoming, late 2021).
- Sector transition pathways and frameworks for various sectors. We are currently working on electricity and steel, and expect to complete these as well as transport by the end of 2021.
- Carbon performance assessment frameworks for corporate fixed income, sovereigns (the ASCOR project) and banks.
- An assessment framework for responsible climate change lobbying (forthcoming, Sept 2021).

2. Our Position and Perspective

We think it is important to start with a summary of our position:

- We – both through our leadership role within TPI and through our individual organisations – strongly support the principle of portfolio alignment as demonstrated through our work with and active support of, amongst others, the Paris Aligned Investing Initiative (PAII). We have been long-standing supporters of TCFD. We have used TCFD to structure our own climate change reporting, we have aligned the TPI with TCFD, we have encouraged companies (directly and through collaborative engagement such as CA100+) to align their reporting with TCFD, and we have supported policy proposals to introduce TCFD into legislation.

The Bank of England's Perspective

We note that the Bank of England drew similar conclusions – both about the relevance of the implied temperature metrics and about the hierarchy of different assessment methodologies - in its May 2021 paper: *Options for greening the Bank of England's Corporate Bond Purchase Scheme*³

In relation to forward-looking metrics it noted: “Implied temperature rise (ITR) metrics have a particularly appealing intuition. But the current generation of measures remains very sensitive to assumptions, complicating their use in operational decision making. Methodologies for these types of measures are, however, improving... Nonetheless, some issues are inherent to ITR metrics, and may not be eliminated entirely by methodological improvements. For example, they require a large number of assumptions about the nature and credibility of constituent firms’ future emissions paths, and can be sensitive to small changes in these assumptions.

Therefore, in parallel to this ongoing support, the Bank and others are exploring simpler and more transparent approaches to forward-looking metrics. This includes looking directly at corporate decarbonisation plans, rather than incorporating them into ITR metrics, to avoid the range of assumptions needed.”

- These initiatives – TPI, AOA, PAII, TCFD – have made many important contributions in terms of data, metrics and tools. However, assessing portfolio alignment – in particular, using the more complex metrics such as implied temperature rise – remains very much a work in progress. There are many data and methodology issues that need to be resolved before such metrics can be considered ready for widespread adoption. We have attached our October 2020 submission to TCFD which sets out some of these issues.
- We are concerned that what we see as the rush to adopt portfolio alignment metrics – in particular those which reduce this to a single metric – will have a series of undesirable consequences for asset owners. In particular, we are concerned that:
 - Asset owners will be forced to make investment decisions that compromise the duty that they owe to their beneficiaries.
 - We create incentives for asset owners to divest from high impact sectors rather than to stay invested and encourage, challenge and support company management to decarbonise their business and achieve net zero.
 - The utility of the proposed metrics for decision-making has not been fully demonstrated; we risk requiring asset owners to do a significant amount of work that provides no benefit either to them as investors, to their beneficiaries or to wider society.
- The status of TCFD means that it is now a *de facto* standard in many jurisdictions and an actual standard in an increasing number of jurisdictions. Therefore, any changes, even if apparently modest, need to be properly scrutinised and reviewed before they are adopted.

³ See <https://www.bankofengland.co.uk/-/media/boe/files/paper/2021/options-for-greening-the-bank-of-englands-corporate-bond-purchase-scheme-discussion-paper.pdf?la=en&hash=9BEA669AD3EC4B12D000B30078E4BE8ABD2CC5C1>

This is not a call to preserve TCFD as it is for all time but, rather, an acknowledgement that the evolution of TCFD needs the same level of scrutiny and governance as domestic legislation. That is, the benefits and the costs of any changes to TCFD need to be clearly documented and discussed.

3. Comments on the TCFD reports

Turning to the two TCFD reports (*Proposed Guidance on Climate-related Metrics, Targets, and Transition Plans* and *Measuring Portfolio Alignment: Technical Supplement*), we would like to offer the following comments:

- We recognise the importance of both documents and support their general aims.
- We are however concerned that they risk hard-wiring inappropriate reporting requirements into TCFD, at a point when those technical requirements are a long way from being properly developed, meaningful, decision-useful or even cost-effective to apply (again, see our October 2020 submission to TCFD).
- We are concerned that both documents draw conclusions that are not supported by the analysis within the reports. As we discussed in our meeting, the reports do not set out – for example – the core steps that need to be followed to produce an implied temperature metric. As a consequence, assertions in the report (e.g. ‘Additionally, only ITR tools provide the ability to translate degree of misalignment of a given company with a benchmark into consequences for a desired climate goal,...’ (p. 6)) are simply not supported by the analysis in the report.

4. Moving Forward

As we discussed, there is a strong interest and desire on our part to advance this agenda at pace, and to support TCFD in its efforts. There are two areas where we think progress can be made:

- Rewording the TCFD recommendations so that additional reporting requirements are introduced for asset owners only at the point when such reporting is practical, cost-effective and generates decision-useful information.
- Developing a more rigorous approach to and understanding of portfolio alignment metrics and measures. We outline each of these briefly

4A. TCFD Recommendations

- We refer to the Asset Owner related recommendation on p. 69 (which states: “Asset owners should measure and disclose the alignment of their portfolios consistent with a 2°C or lower temperature pathway (e.g., Paris-aligned), and incorporate forward-looking alignment metrics into their target-setting frameworks and management processes.”)
- Our view – reflecting the comments above - is that this wording is both overly prescriptive and not reflective of current practice, and therefore needs to be changed. We also recognise that there is a need to create pressure for action in this area so that robust, decision-useful tools and metrics are developed.

- We therefore suggest the following wording: “As the data and tools to assess portfolio alignment are not, as yet, sufficiently developed, asset owners should plan to measure and disclose the alignment of their portfolios consistent with a 2°C or lower temperature pathway (e.g., Paris-aligned), and incorporate forward-looking alignment metrics into their target-setting frameworks and management processes. Asset owners should also report on the efforts they have taken and intend to take to produce the data and tools necessary to conduct a full portfolio alignment assessment.”

4B: Portfolio alignment metrics and measures

The narrative in the Technical Supplement about implied temperature rise metrics is essentially a black box discussion. It is asserted that the approach is relevant but with no substantive explanation of what the approach involves (i.e. how is the metric constructed), the data needed to construct the metric or the decision-usefulness of the metric or the underlying calculations.

We have therefore suggested to the TCFD Team that we work with them to conduct an analytical exercise that has three elements:

- A mapping of the steps that need to be taken to develop an implied temperature metric or other measure of portfolio alignment.
- For each step:
 - Identify the data needed for the step [noting that there may be more than one approach or that different data sets may fill the same need].
 - Assess whether the data sets exist or whether there are gaps.
 - Identify the actions needed to fill these gaps.
- For each step:
 - Explain what inferences/conclusions could be drawn if complete data sets were available.
 - Explain what inferences/conclusions could be drawn using current data sets.
 - Define the decisions that can be made based on the information.

This analysis will require further consideration on an asset class by asset class basis and will also need an explicit discussion of uncertainties (in data, in methods, in decision-making).



Brunel Pension Partnership 2022 Carbon Metrics Report

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Brunel Pension Fund Carbon Metrics Report



Holdings as at 31st December 2021

Key Info: AUM in mGBP: 19,767 Coverage: 98% 24/10/2022

Brunel Carbon Metrics Report 2022

This report illustrates key Carbon Metrics for the Brunel Aggregate Portfolio and the associated underlying Brunel Portfolios as of 31 December 2021.

This report builds on Carbon Metrics reports published in December 2019 and 2020 and documents the results of the decarbonisation work we have undertaken across our Portfolios over this time.

We have been working extensively on decarbonising our Portfolios alongside our managers and we have launched a number of new Portfolios and benchmark indexes which are illustrated for the first time in this report.

We extend our thanks to S&P Trucost who provided the footprinting data for this report.

Executive Summary

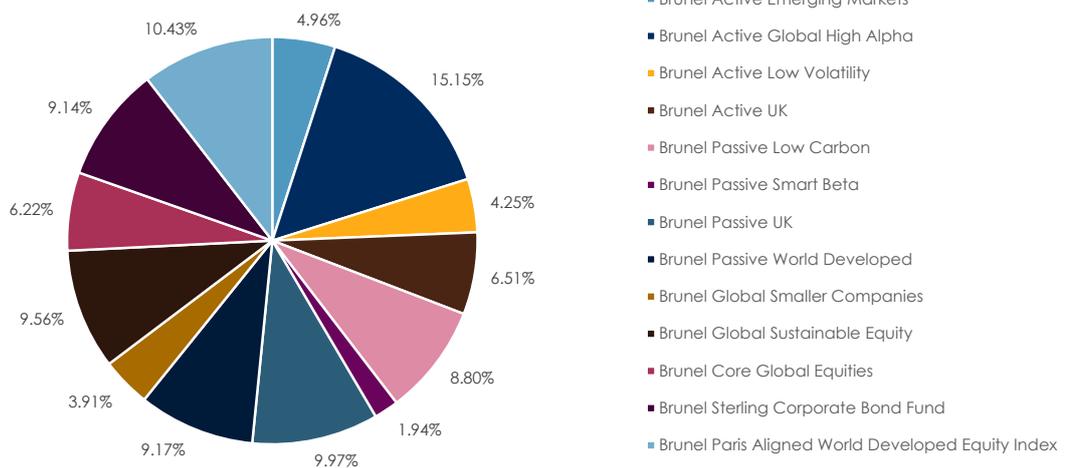
- The Brunel Aggregate Portfolio consists of the underlying Brunel Portfolios, weighted by assets under management as of 31 December 2021.
- The Weighted Average Carbon Intensity (WACI) of the Brunel Aggregate Portfolio is below its Strategic Benchmark, with a relative efficiency of +21%.
- Of the Brunel Sub-Portfolios within the Aggregate, the highest intensity was the Brunel Emerging Markets Portfolio (383 tCO₂e/mGBP), while the lowest was the Brunel Core Global Equities (116 tCO₂e/mGBP).
- The Brunel Emerging Markets Portfolio saw a decrease in carbon intensity of 4.9% from the previous year.
- Brunel Sterling Corporate Bond Fund has slightly higher carbon intensity compared to its benchmark. All other Brunel Active Sub-Portfolios have lower levels of carbon intensity compared to their respective benchmarks.
- The Brunel Aggregate Portfolio is less exposed to both fossil fuel revenues (0.95% vs 1.81%) and future emissions from reserves (21.7 MtCO₂ vs 44.6 MtCO₂) than its Strategic Benchmark.
- The company disclosures rates are based on Scope 1 emissions, where 53% of companies within the Brunel Aggregate Portfolio have fully disclosed carbon data by carbon weighted method, and 40% by investment weighted method. The Trucost methodology for this carbon disclosure metric has been updated from last year in order to reflect more granular disclosures. Companies must now be disclosing emissions across the different Kyoto protocol gases in order to be classified as 'full disclosure', whereas previously only an aggregate emissions figure was required.
- Absolute carbon emissions is a new metric we have included in this year's carbon metrics report. The measure refers to the total carbon emissions allocated to the portfolio in absolute terms and the higher percentage holding in a company within a portfolio, the more of its emissions are 'owned'. Absolute emissions for different Portfolios cannot be compared on a like for like basis because the data is not normalised and the size of the portfolio can skew the results.

Holdings as at 31st December 2021

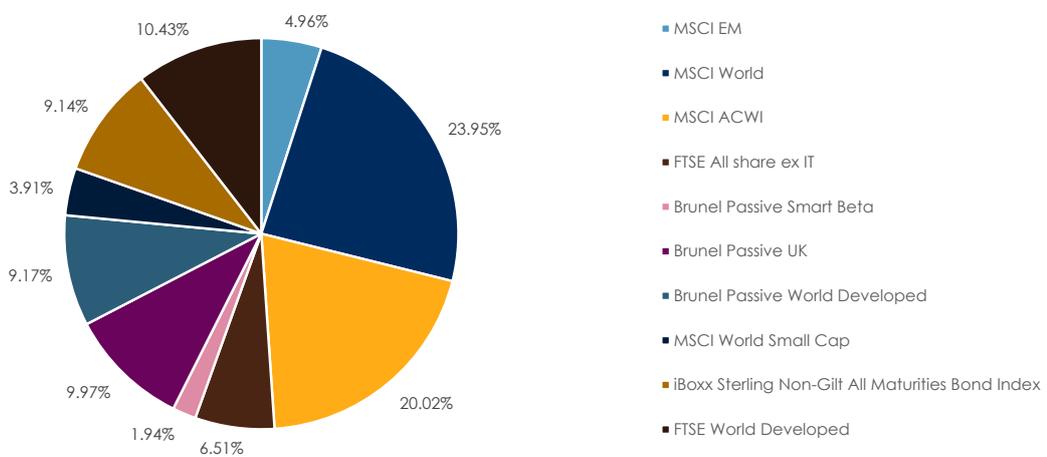
The Brunel Aggregate Portfolio and Custom Benchmark

- This report includes a variety of carbon metrics, including the weighted average carbon intensity (WACI), fossil fuel activities, fossil fuel reserves, carbon data disclosure rates and absolute emissions for each of the Brunel Active and Passive Portfolios.
- We also report on the Brunel Aggregate Portfolio. This consists of each of the underlying Brunel Portfolios weighted by assets under management as of 31 December 2021. Details of this Portfolio are illustrated below.
- We have also created a Custom Benchmark Portfolio in order to make a meaningful comparator. This Custom Benchmark consists of the benchmarks of the underlying Brunel Portfolios, weighted by investment as of 31 December 2021.

Brunel Aggregate Portfolio

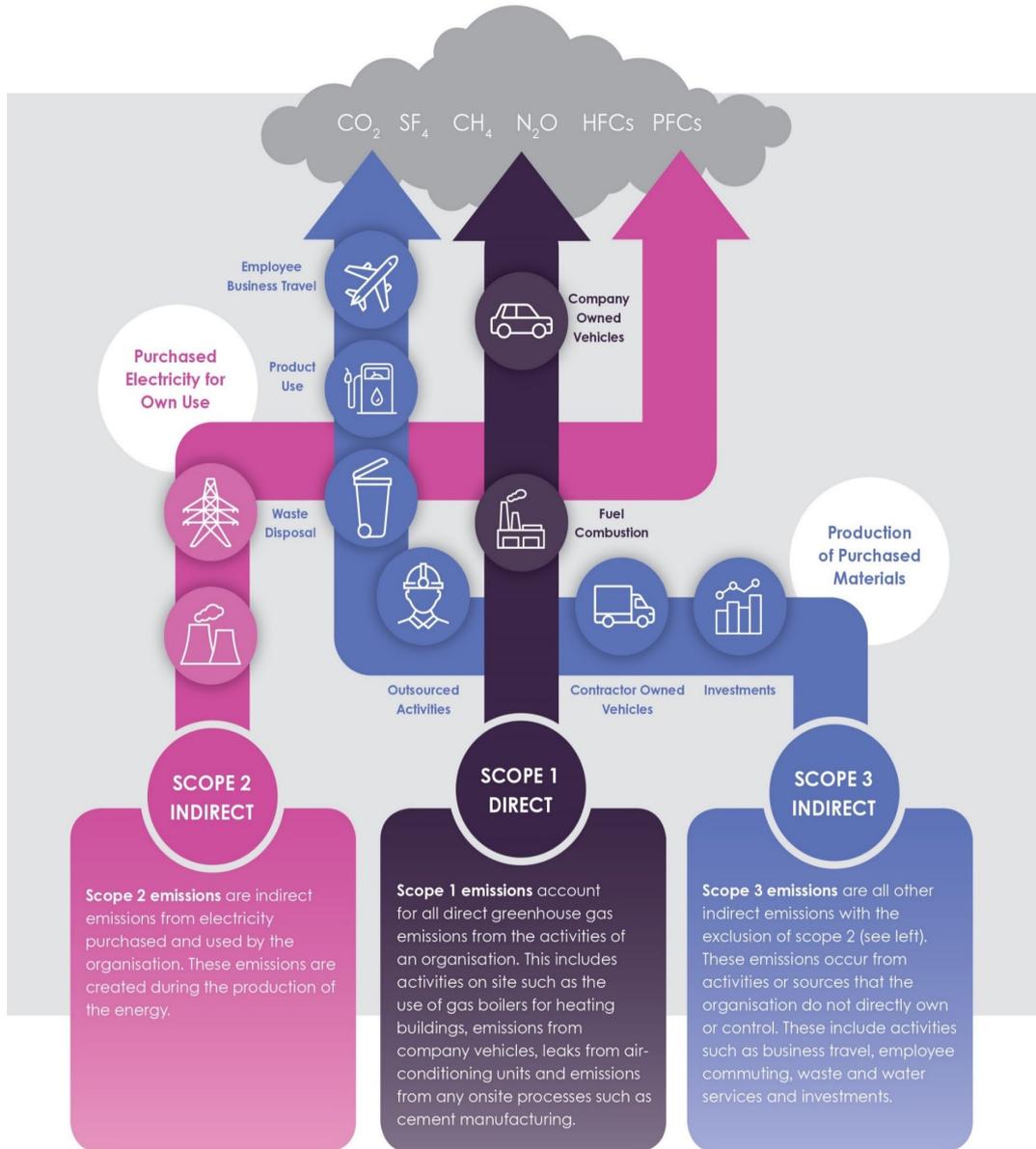


Brunel Custom Benchmark



Scope 1, 2 and 3 emissions

Brunel's emissions data provider (Trucost part of S&P Global) uses Direct and First-tier Indirect Emissions as its default emissions that differ slightly to the Greenhouse Gas (GHG) Protocol's scopes outlined below.



Brunel's data provider defines 'Direct Emissions' as the GHG Protocol's scope 1 emissions, plus any other emissions derived from a wider range of greenhouse gases relevant to a company's operations.

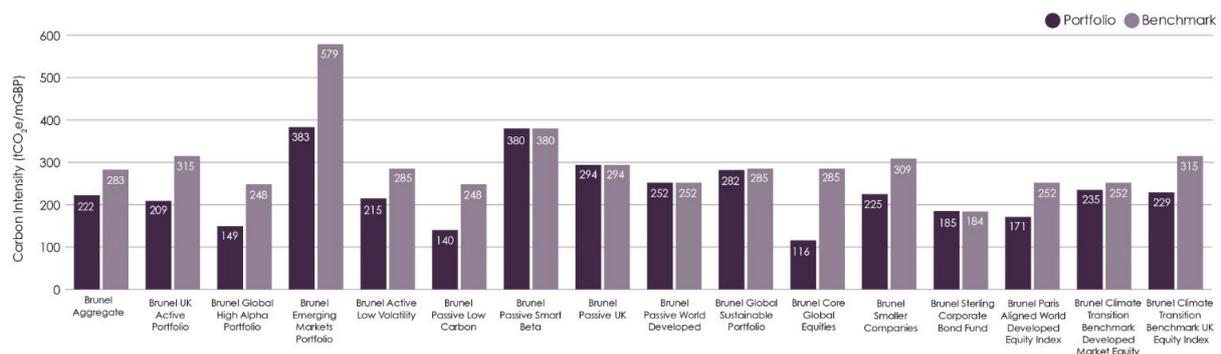
'First-tier Indirect Emissions' are defined as GHG Protocol scope 2 emissions, plus the company's first-tier upstream supply chain – their direct suppliers. This enhancement is to include some of the company's most relevant upstream scope 3 emissions while also limiting the extent of the double counting of emissions.

Weighted Average Carbon Intensity (WACI)

The WACI shows a portfolio's exposure to carbon intensive companies. This measure is determined by taking the carbon intensity of each company and weighting it based on its holding size within the Portfolio.

The WACI is one of the measures recommended by the **Task Force on Climate-related Financial Disclosures (TCFD)**. Because carbon intensive companies are more likely to be exposed to potential carbon regulations and carbon pricing, this is a useful indicator of potential exposure to transition risks such as policy interventions and changing consumer behaviours.

In this report we illustrate the weighted average carbon intensity (WACI) of The Brunel Aggregate Portfolio and each of the underlying Brunel Portfolios, alongside their respective benchmarks.



We aim to reduce the carbon intensity of our Portfolios by 7% each year.

All active equity Portfolios have achieved at least a 7% emissions intensity reduction.

Portfolio	Reduction %	2021 Portfolio	2019 Baseline
Brunel Aggregate	35.16%	222.2	343
Active Portfolios			
Brunel UK Active Portfolio	25.89%	209.0	282
Brunel Global High Alpha Portfolio	50.37%	149.3	301
Brunel Emerging Markets Portfolio	32.89%	382.7	570
Brunel Active Low Volatility	35.70%	214.7	334
Brunel Sustainable Equities Portfolio	15.44%	282.3	334
Brunel Core Global Equities	65.13%	116.4	334
Brunel Smaller Companies*	27.11%	225.2	309
Brunel Sterling Corporate Bond Fund**	-0.67%	185.4	184
Passive Portfolios			
Brunel Passive Low Carbon	53.35%	140.3	301
Brunel Passive Smart Beta	31.46%	379.5	554
Brunel Passive UK	-4.67%	294.4	281
Brunel Climate Transition Benchmark UK Equity Index	18.47%	229.3	281
Brunel Passive World Developed	16.98%	251.6	303
Brunel Paris Aligned World Developed Equity Index	43.42%	171.5	303
Brunel Climate Transition Benchmark Developed Market Equity Index	22.50%	234.9	303

*Trucost updated methodology in 2020 means we have taken December 2020 as a baseline for the Smaller Companies Portfolio

** This Portfolio has a baseline of 31 December 2021

Fossil Fuel Related Activities

It is important to identify exposure to business activities in extractives industries in order to assess the potential risk of 'stranded assets'. Stranded assets are assets that may suffer premature write-downs and may even become obsolete due to changes in policy or consumer behaviour.

We can identify the exposure to stranded asset risk in a number of ways. One way is to consider the fossil fuel related activities of the underlying companies within our Portfolios.

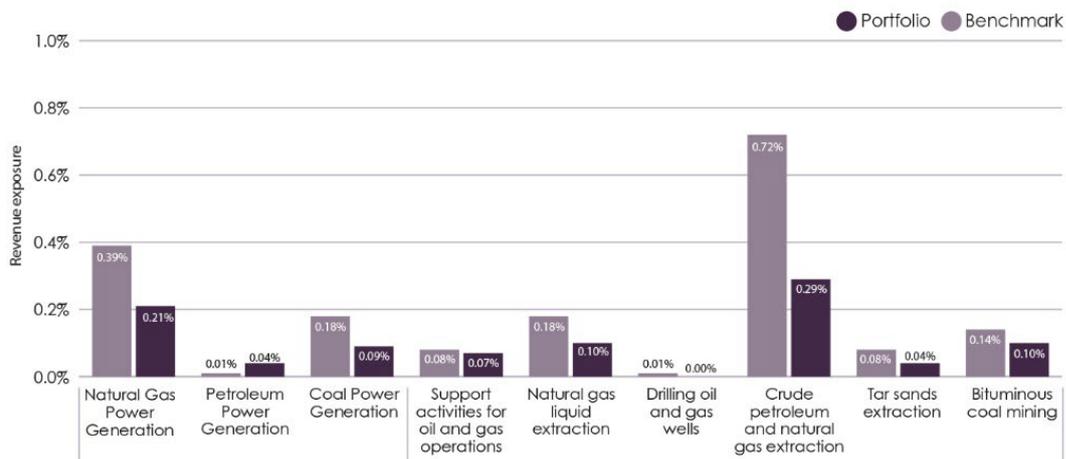
Extraction-related activities:

- Crude petroleum and natural gas extraction
- Tar sands extraction
- Natural gas liquid extraction
- Bituminous coal underground mining
- Bituminous coal and lignite surface mining
- Drilling oil and gas wells
- Support activities for oil and gas operations

We identify companies with exposure to fossil fuel related energy generation (gas power, petrol power and coal power) and fossil fuel related extraction related activities (definitions on the left). We can assess the revenue exposure that each company has to these activities - and aggregate this to get an overall Portfolio assessment.

We illustrate this revenue exposure for all Brunel Portfolios and their respective benchmarks. We also provide an assessment of the Brunel Aggregate Portfolio.

The Brunel Aggregate Portfolio - Fossil Fuel Revenue Exposure



The Brunel Aggregate Portfolio is less exposed to fossil fuel revenues than its Custom Benchmark (0.95% vs 1.81%).

The Portfolio is less exposed to fossil fuel related activities across all generation and extractives activities measured, with the exception of 'Petroleum Power Generation'.

Our Active Portfolios have significantly less exposure to fossil fuel related activities across most of these activity types compared to their respective benchmark. To view each Portfolio please see the analysis later on in this report.

Fossil Fuel Reserves Exposure

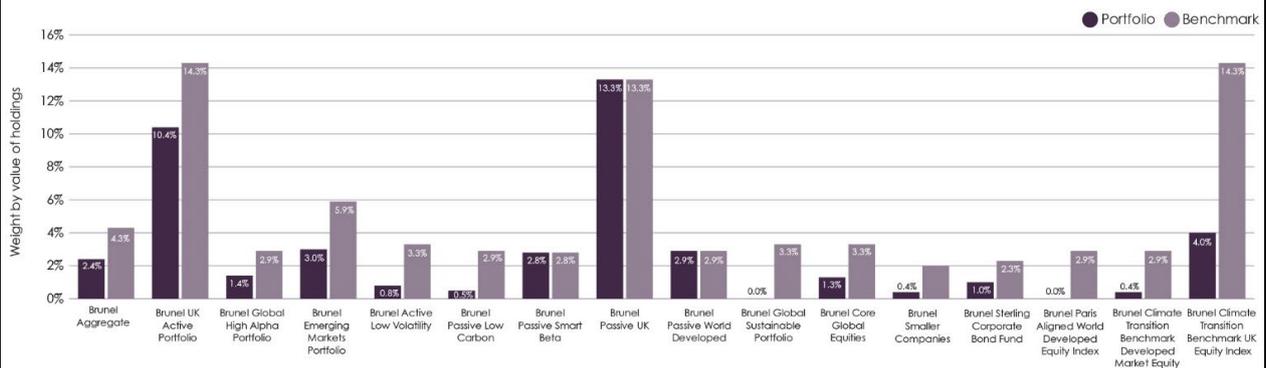
As well as assessing the revenue exposure from fossil fuel related activities, another way to assess the risk of stranded assets is to consider fossil fuel reserves. This is the exposure to fossil fuels which have not yet been realised by companies.

Fossil fuel reserves exposure give us a measure of companies that have disclosed their 'proven' reserves, as well as capturing companies that have 'probable' fossil fuel reserves.

Proven reserves exposure - have a > 90% chance of being present
Probable reserves exposure - have a >50% chance of being present

We identify companies that have both proven and probable reserves - and can look at the aggregate exposure within each of our Portfolios, as well as the Brunel Aggregate Portfolio. Each Portfolio is illustrated in this report against its respective benchmark.

Fossil Fuel Reserves Exposure



The Brunel Aggregate Portfolio is less exposed to fossil fuel reserves (2.4%) compared to its Custom Benchmark (4.3%).

Our Active Portfolios have significantly less exposure to fossil fuel reserves compared to their respective benchmarks.

As expected our Passive Portfolios track their relevant indexes.

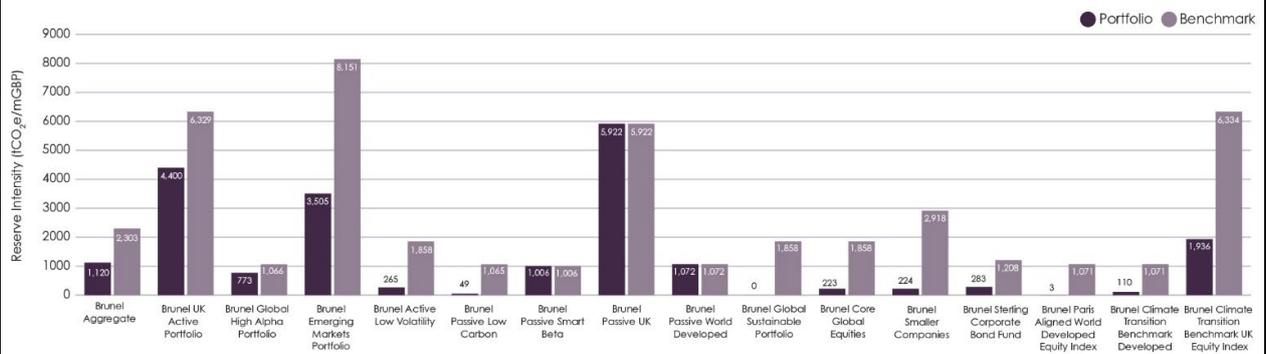
Potential Emissions from Reserves

Taking the reserves exposures discussed above, we can look at an assessment of potential future emissions that may incur from these reserves being realised. This metric is not included in the WACI figure (which focuses on current intensity) - and so it is an important assessment of company's potential contribution to emissions via its stockpile of fossil fuels.

We have been able to assess the potential emissions associated with the proven and probable reserves for companies within our Portfolios, as well as an overall Portfolio assessment.

We illustrate the potential emissions from reserves for each of our Portfolios and their respective benchmarks below, as well as the Brunel Aggregate Portfolio.

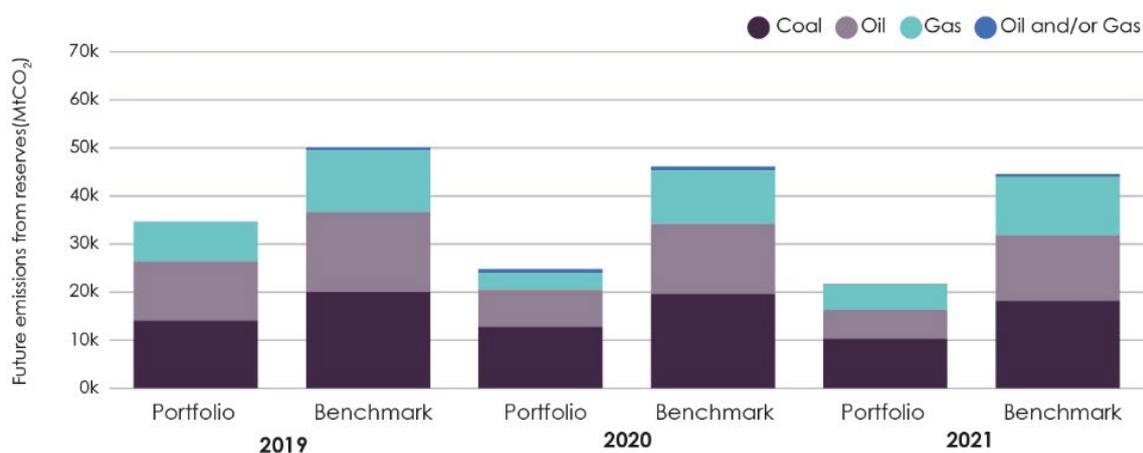
Future Emissions from Reserves



As well as an overall assessment of potential emissions from reserves, we are able to break these potential emissions down by fossil fuel type. We provide this analysis for each Portfolio against its benchmark, as well as how it has changed over time.

Below we display this analysis for the Brunel Aggregate Portfolio.

Future Emissions from Reserves by Fossil Fuel Type - Brunel Aggregate Portfolio



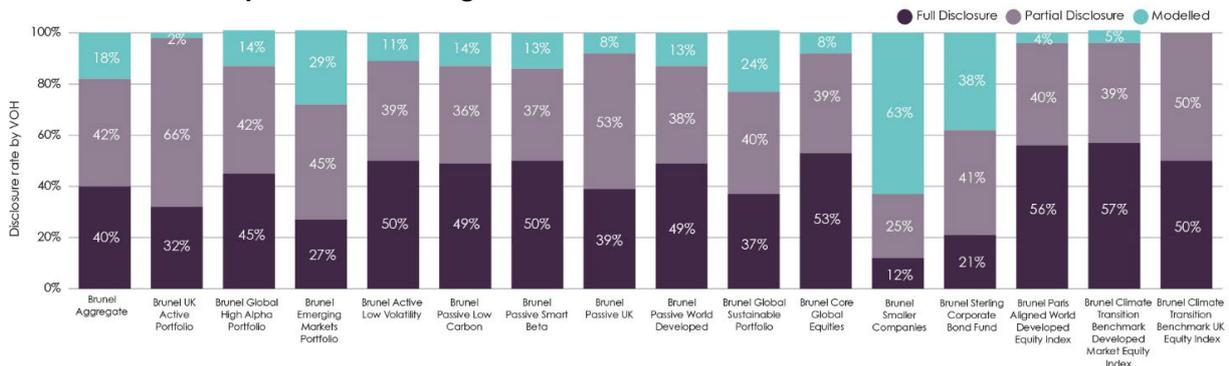
Disclosure Rates

In order to determine the carbon footprints and associated metrics in this report, Trucost collects company information such as disclosure around greenhouse gas emissions and business activities. To collect this data Trucost use a variety of sources such as annual reports and financial statements, regulatory filings, Corporate Social Responsibility reports and information published on company websites.

In the absence of this data, Trucost uses what is known as an 'input-output model' to estimate as best as possible the data for a particular company. This model combines industry-specific environmental impact data alongside macroeconomic data. Sometimes a company reports some carbon or business activity data; in which case Trucost can partially model the company's footprints and metrics. In the absence of usable or up to date disclosures Trucost fully models a company's footprint and metrics.

The Trucost methodology for this carbon disclosure metric has been updated from last year in order to reflect more granular disclosures. Companies must now be disclosing emissions across the different Kyoto protocol gases in order to be classified as 'full disclosure', whereas previously only an aggregate emissions figure was required.

Disclosure Rates - by Investment Weight



Full Disclosure - companies fully reporting their own carbon data.

Partial Disclosure - the data disclosed by companies has been adjusted in some way. This may include using data from previous years' disclosures as well as estimating changes in business activities.

Modelled - in the absence of usable or up to date disclosures, the data has been estimated by Trucost models.

Disclosure rates vary enormously across the world and this is one of the reasons Brunel is a strong advocate for mandatory climate risk reporting for all companies. The higher the level of direct disclosure, the higher the confidence in the data against which to take action. Over time, we seek to increase the proportion of direct or 'full disclosure' of all our portfolios.

The level of company disclosures for the Brunel Aggregate Portfolio and each Brunel Sub-Portfolio is illustrated above. Unsurprisingly companies under lower regulatory regimes such as Smaller Companies and Emerging Markets have lower levels of disclosure rates.

In this report we provide a breakdown of the disclosure rates of each of the Brunel Portfolios and the Brunel Aggregate Portfolio on both an investment weighted and greenhouse gas weighted basis. We also show how it has changed over time.

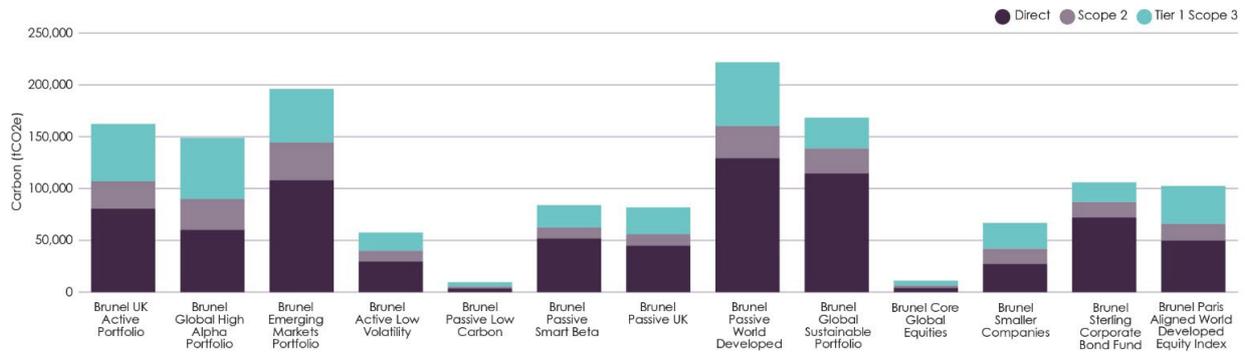
Generally speaking all of our Portfolios tend to have higher disclosure rates than their respective benchmarks.

Absolute Carbon Emissions

Absolute carbon emissions is a new metric we have included in this year's carbon metrics report. The measure refers to the total carbon emissions allocated to the portfolio in absolute terms, allocating emissions to an investor based on levels of capital invested in a company. The higher percentage holding in a company within a portfolio, the more of its emissions are 'owned'.

Absolute emissions for different Portfolios cannot be compared on a like for like basis because the data is not normalised and the size of the portfolio can skew the results.

Absolute Carbon Emissions

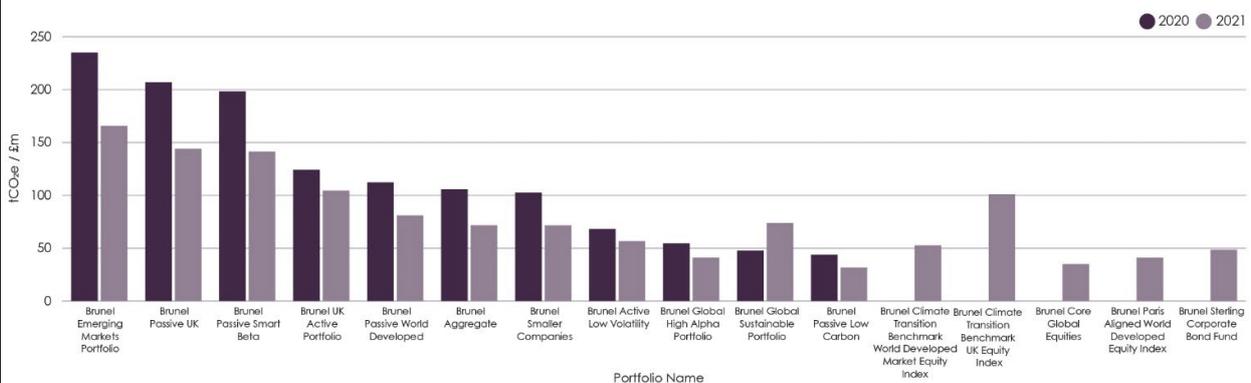


Direct - GHG Protocol's scope 1 emissions, plus any other emissions derived from a wider range of greenhouse gases relevant to a company's operations. Scope 1 emissions are emissions from directly emitting sources that are owned or controlled by a company, for example, the emissions produced by the internal combustion engines of a trucking company's lorry fleet.

Scope 2 - emissions from the consumption of purchased electricity, steam, or other sources of energy generated upstream from a company's direct operations.

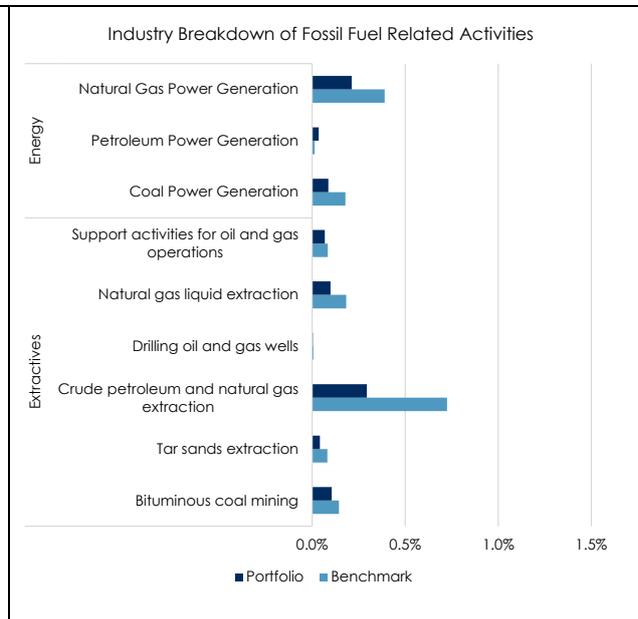
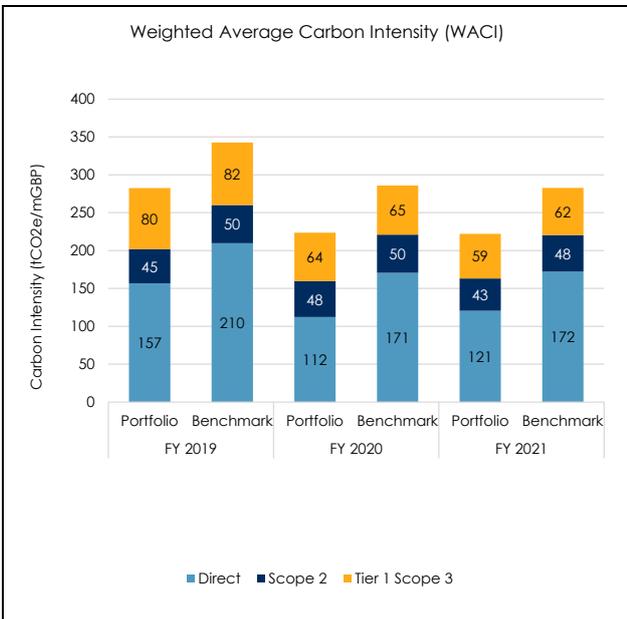
First Tier Scope 3 - the company's first-tier upstream supply chain – their direct suppliers.

Normalised Absolute Carbon Emissions By Value Invested



Brunel Aggregate vs. Brunel Custom BM

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

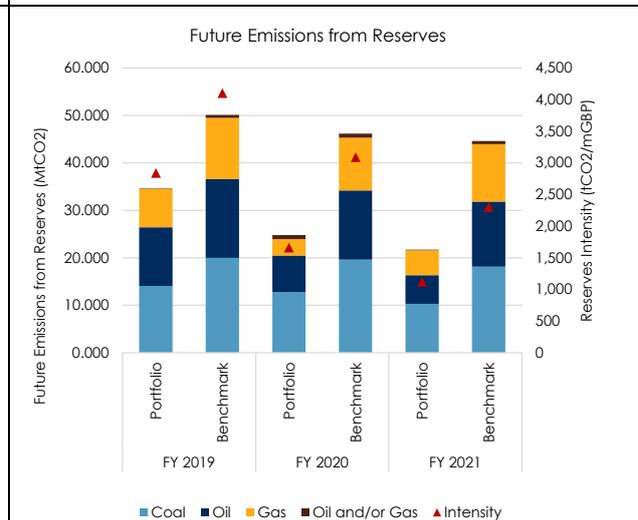
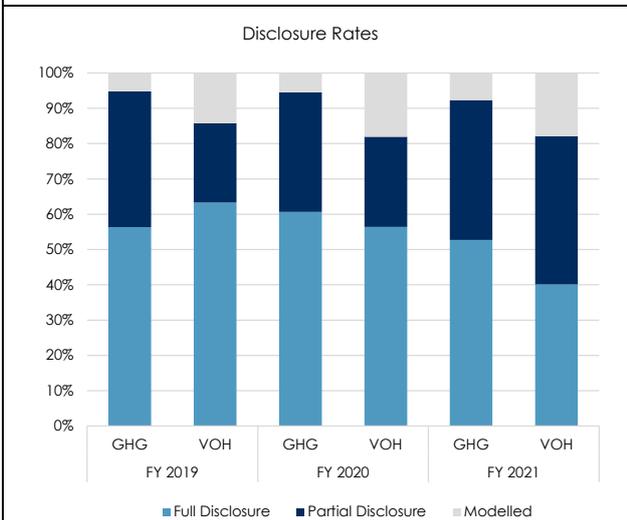
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Waste Management, Inc.	2,891	0.18%	-2.22%
Republic Services, Inc.	2,855	0.17%	-2.04%
South Eastern Power Networks plc	7,625	0.06%	-1.89%
Holcim Ltd	7,263	0.05%	-1.59%
Linde plc	1,977	0.20%	-1.55%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Royal Dutch Shell PLC	0.47%	0.11%
BHP Group	0.37%	0.09%
Halliburton Company	0.03%	0.04%
Duke Energy Corporation	0.07%	0.04%
Anglo American Plc	0.29%	0.03%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	53%	40%
Partial Disclosure	40%	42%
Modelled	8%	18%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	12.77	19.61	10.31	18.16
Oil	7.69	14.59	6.01	13.70
Gas	3.47	11.12	5.27	12.09
Oil and/or Gas	0.87	0.84	0.11	0.66

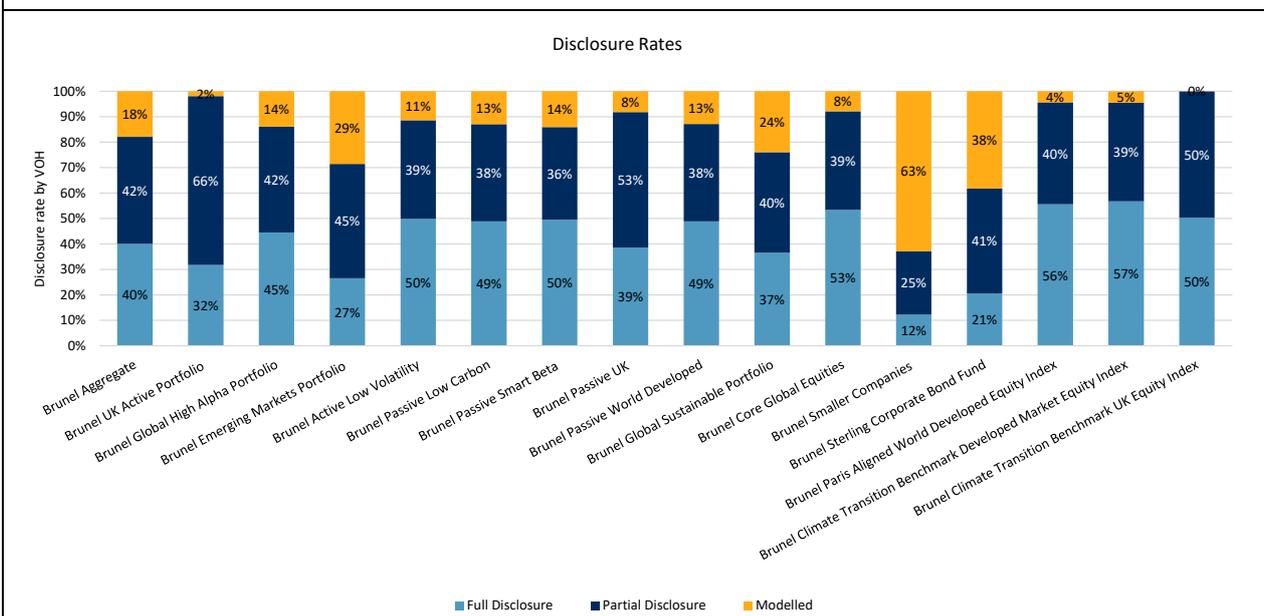
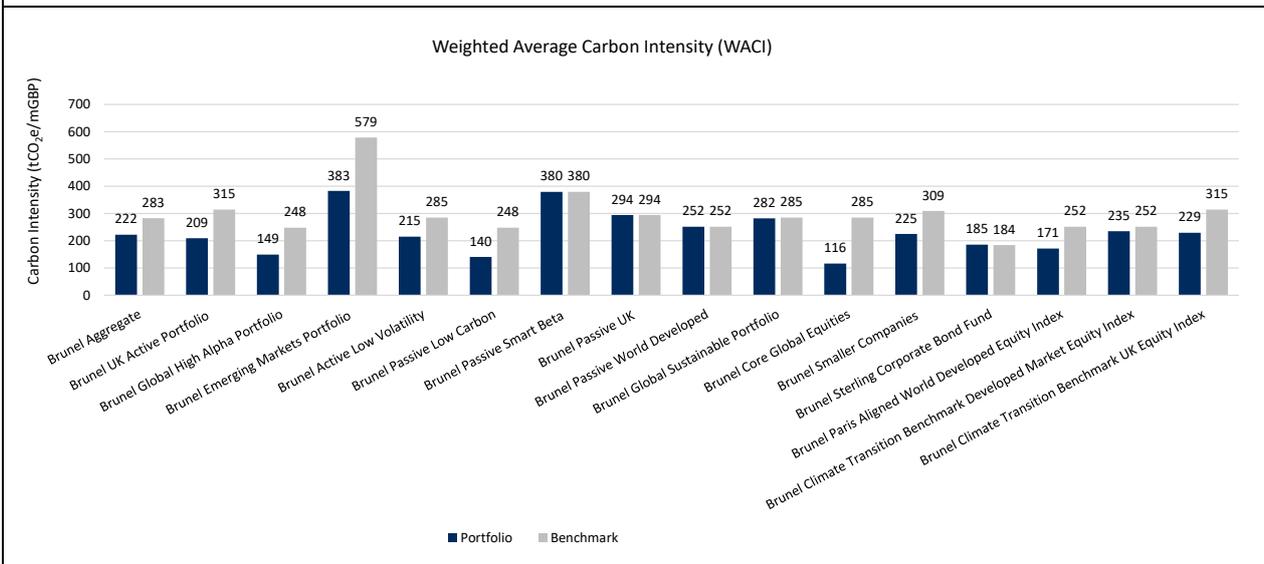
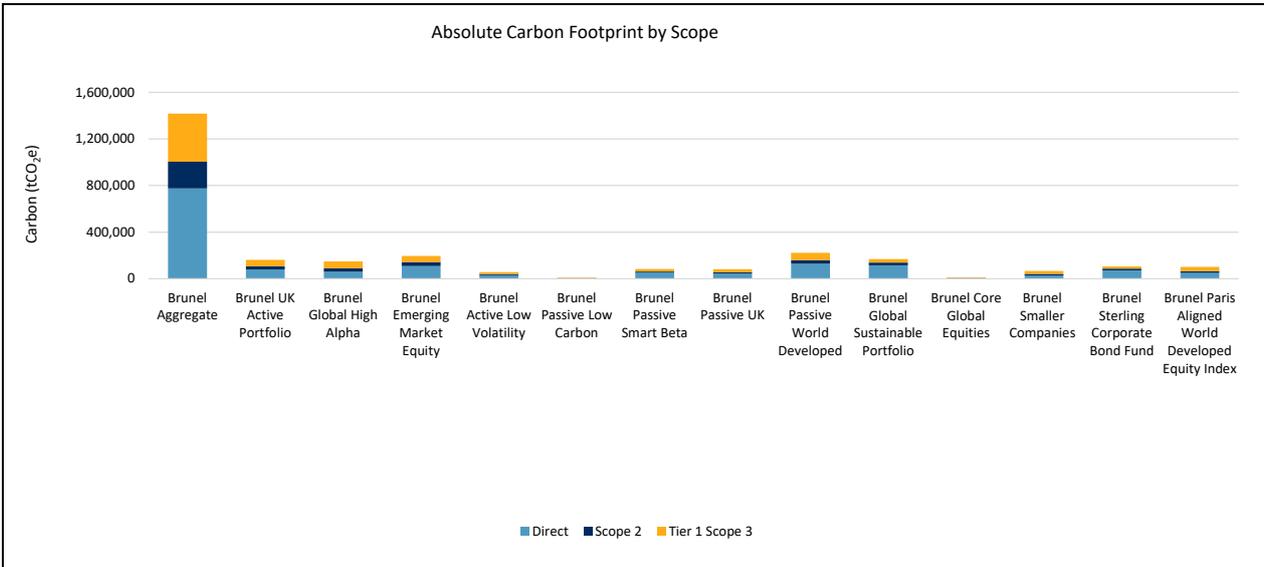
Full Disclosure - Data disclosed by a company in an un-edited form.
Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

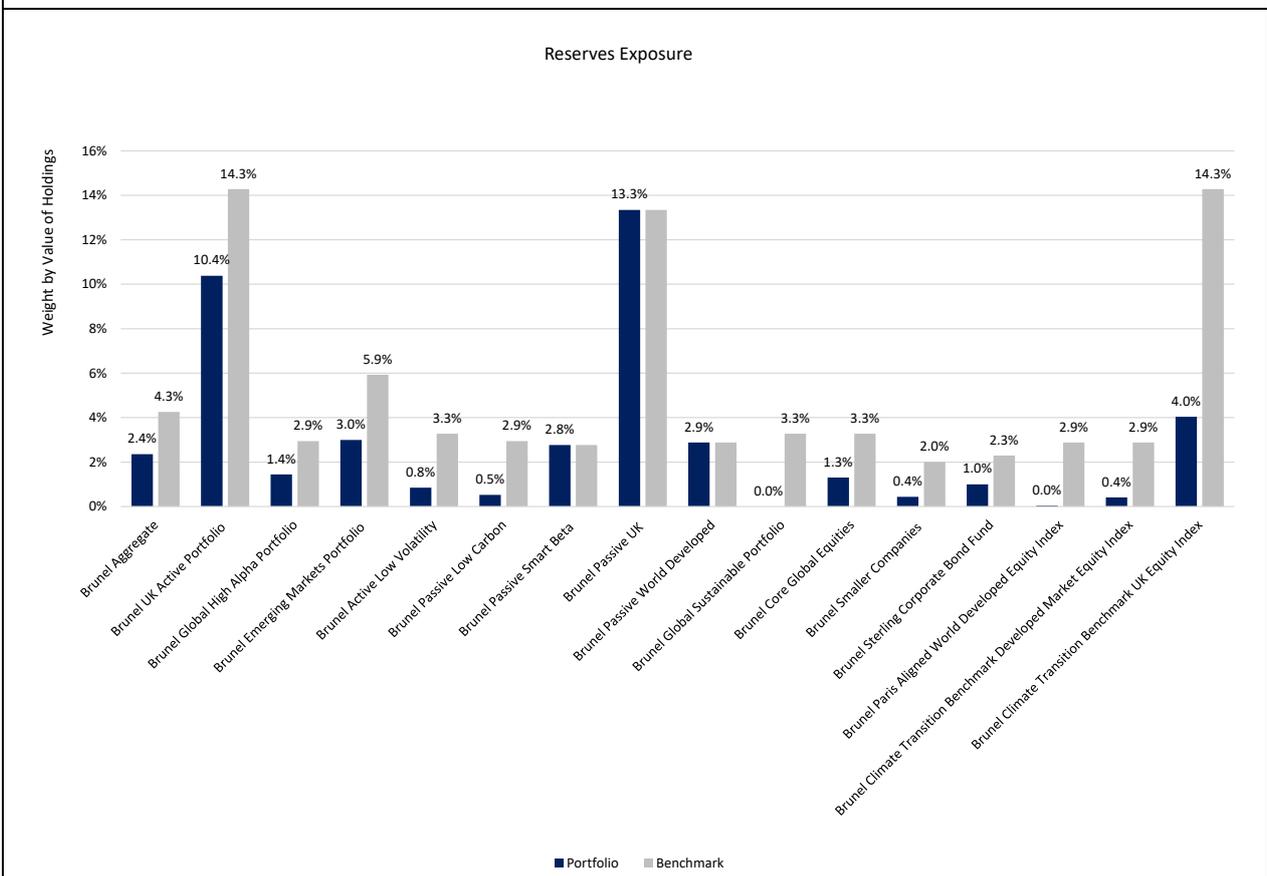
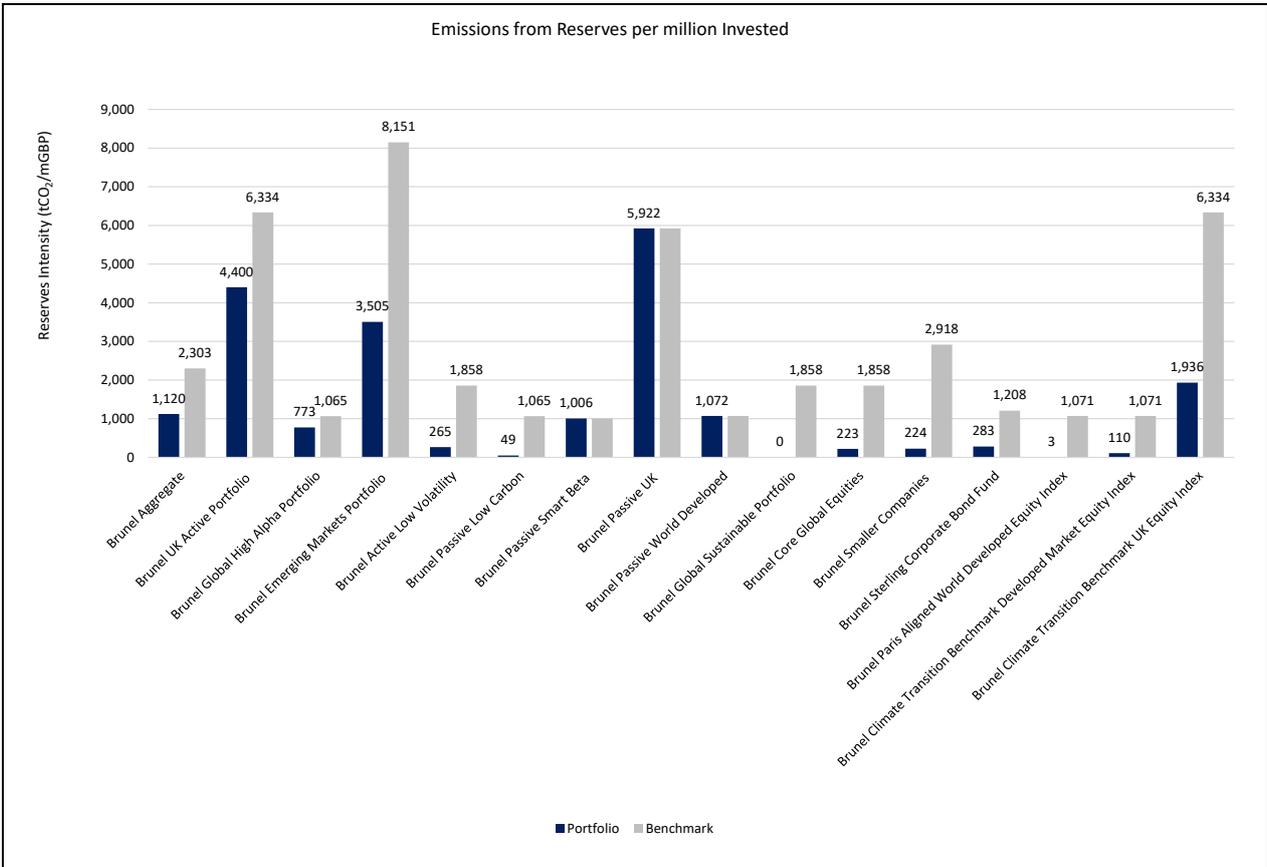
Summary Sheet

Holdings as at 31st December 2021



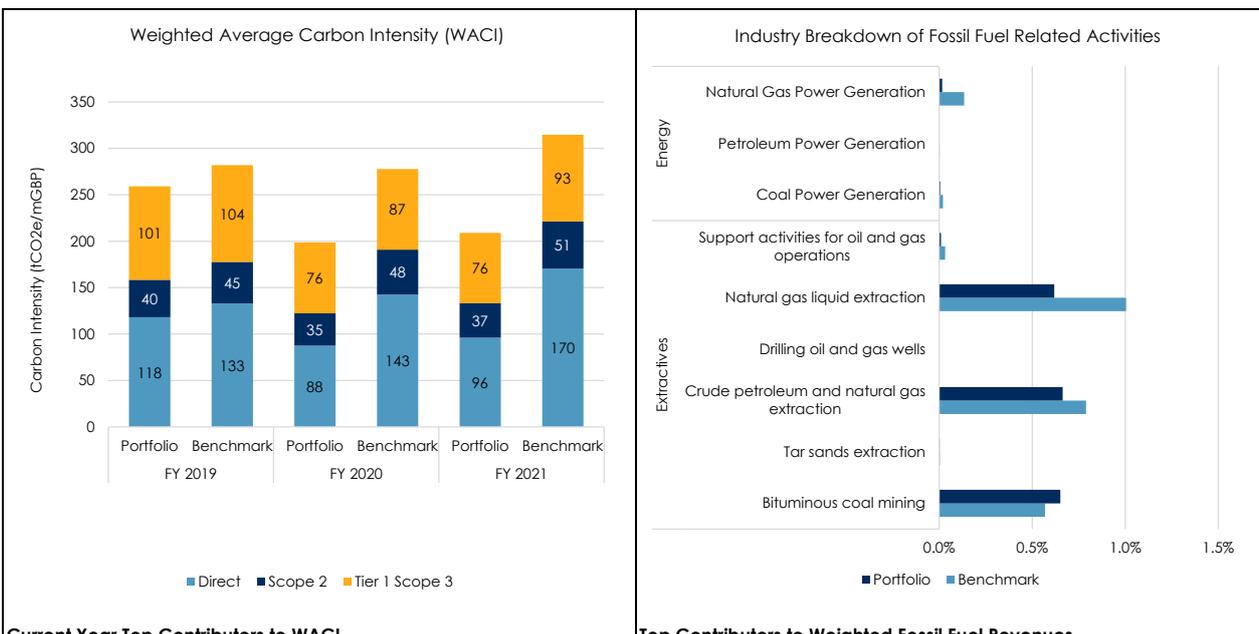
Summary Sheet

Holdings as at 31st December 2021



Brunel UK Active Portfolio vs. FTSE Allshare ex IT

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

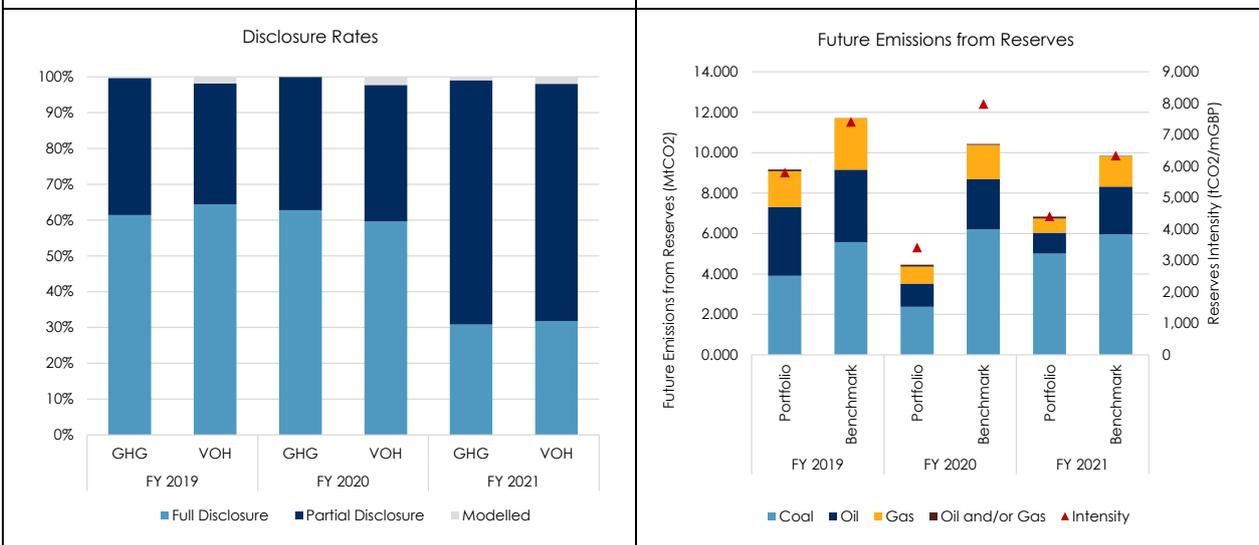
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Rio Tinto Group	1,006	3.21%	-12.65%
Royal Dutch Shell PLC	911	3.27%	-11.36%
Mondi PLC	3,396	0.56%	-8.66%
Tate & Lyle plc	2,210	0.63%	-6.10%
BHP Group	544	3.46%	-5.75%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
BHP Group	3.46%	0.82%
Royal Dutch Shell PLC	3.27%	0.73%
EnQuest PLC	0.15%	0.15%
Anglo American Plc	0.69%	0.08%
BP p.l.c.	0.84%	0.08%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	31%	32%
Partial Disclosure	68%	66%
Modelled	1%	2%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	2.37	6.21	5.00	5.96
Oil	1.15	2.48	1.03	2.36
Gas	0.83	1.70	0.71	1.51
Oil and/or Gas	0.10	0.04	0.10	0.02

Full Disclosure - Data disclosed by a company in an un-edited form.

Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.

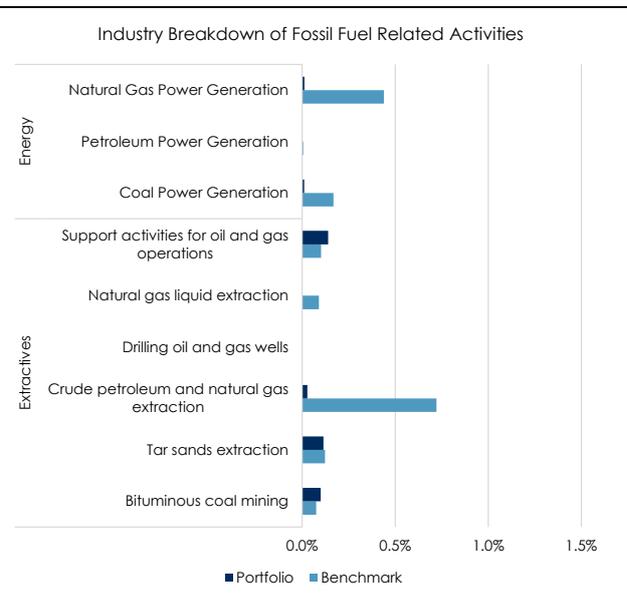
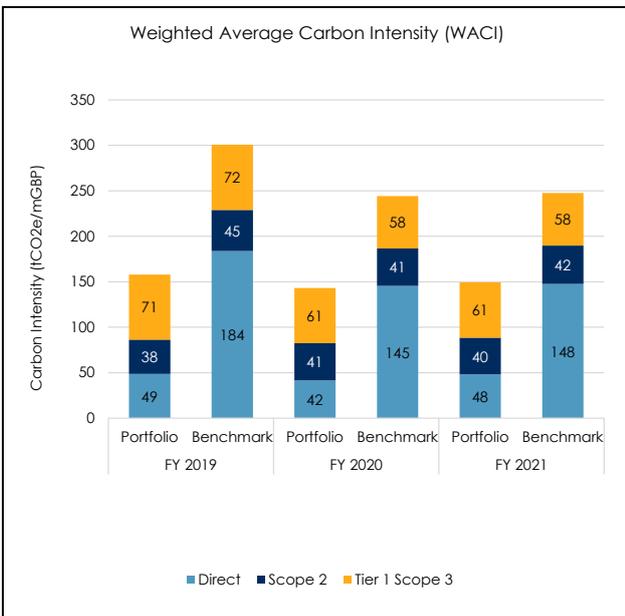
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Global High Alpha Portfolio vs. MSCI World

Holdings as at 31st December 2021

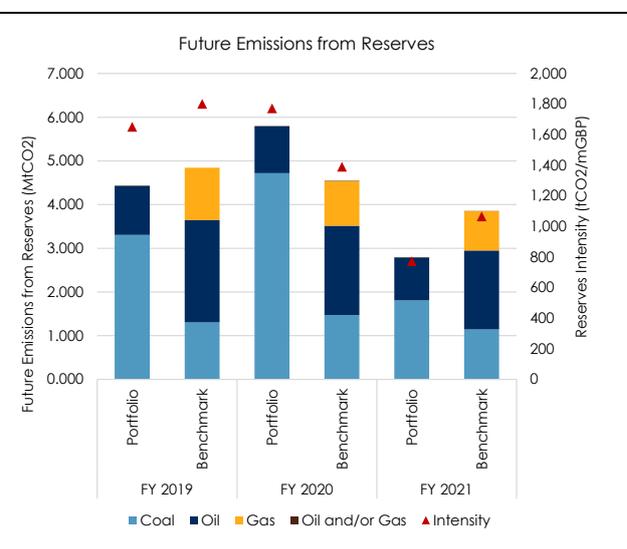
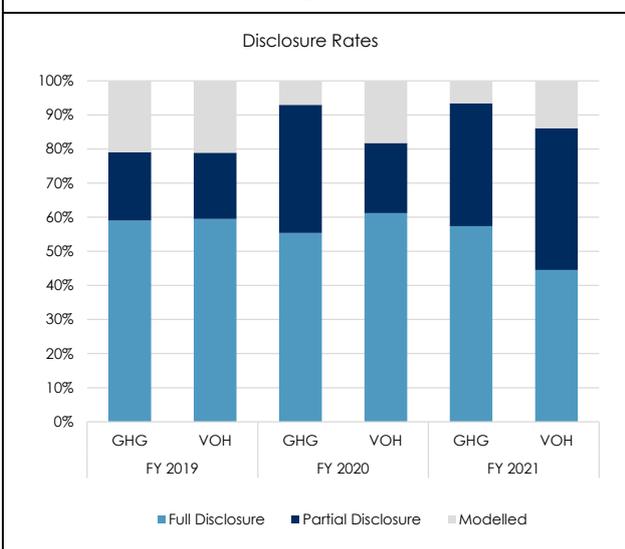


Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Holcim Ltd	7,263	0.22%	-10.28%
Nestle SA	590	1.91%	-5.75%
InterContinental Hotels Group Plc	1,472	0.55%	-4.94%
Steel Dynamics, Inc.	1,083	0.69%	-4.36%
Suncor Energy Inc.	1,846	0.37%	-4.19%

Name	Weight (%)	Weighted FF Revenue (%)
Suncor Energy Inc.	0.37%	0.15%
Halliburton Company	0.14%	0.14%
Anglo American Plc	0.74%	0.09%
Berkshire Hathaway Inc.	0.75%	0.02%
Glencore Plc	0.33%	0.01%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	57%	45%
Partial Disclosure	36%	42%
Modelled	7%	14%

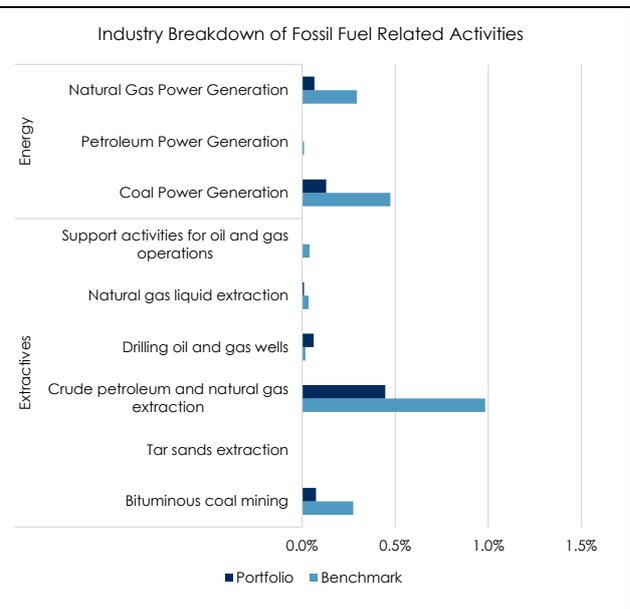
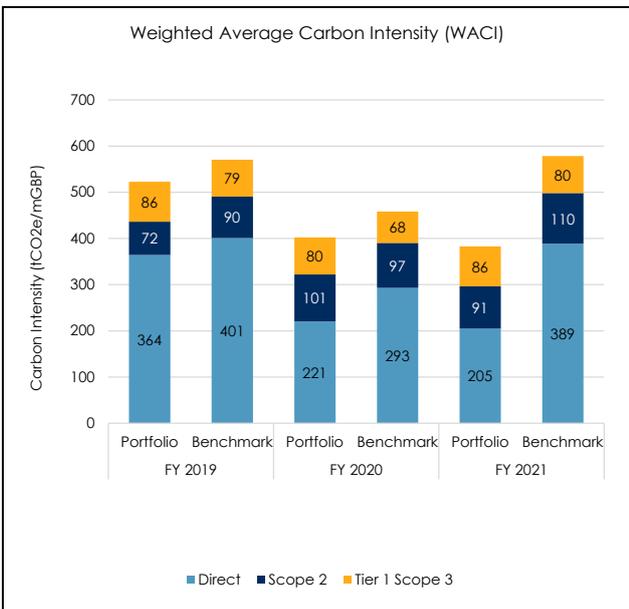
Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	4.72	1.47	1.81	1.14
Oil	1.08	2.04	0.98	1.81
Gas	0.00	1.02	0.00	0.90
Oil and/or Gas	0.00	0.01	0.00	0.00

Full Disclosure - Data disclosed by a company in an un-edited form.
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Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.
 The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Emerging Markets Portfolio vs. MSCI Emerging Markets

2021 Q4



Current Year Top Contributors to WACI

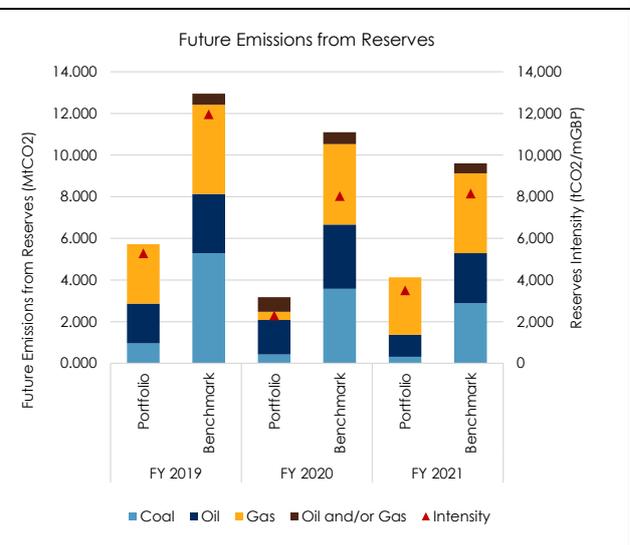
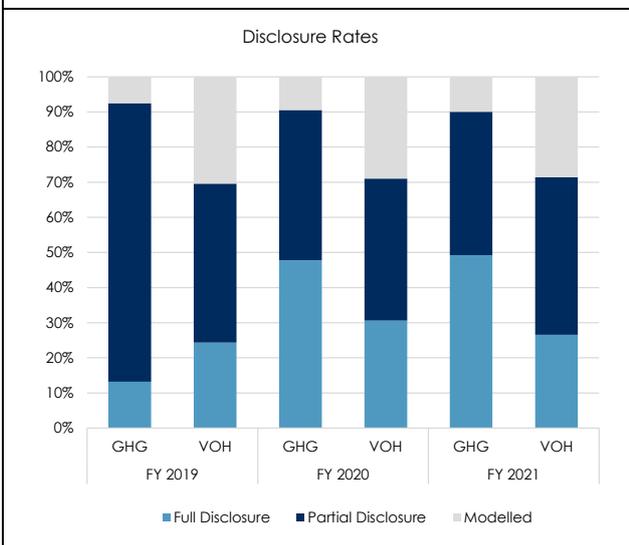
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
PT Semen Indonesia (Persero) Tbk	14,749	0.23%	-8.50%
China Longyuan Power Group Corporati	3,147	0.93%	-6.75%
Airtac International Group	13,683	0.18%	-6.22%
China National Building Material Compar	15,076	0.12%	-4.65%
Public Joint Stock Company Gazprom	2,988	0.56%	-3.83%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Parex Resources Inc.	0.14%	0.15%
PAO NOVATEK	0.13%	0.13%
PJSC LUKOIL	0.32%	0.11%
China Longyuan Power Group	0.93%	0.11%
Public Joint Stock Company G	0.56%	0.09%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	49%	27%
Partial Disclosure	41%	45%
Modelled	10%	29%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	0.43	3.58	0.31	2.89
Oil	1.66	3.08	1.06	2.41
Gas	0.39	3.86	2.76	3.83
Oil and/or Gas	0.71	0.57	0.00	0.47

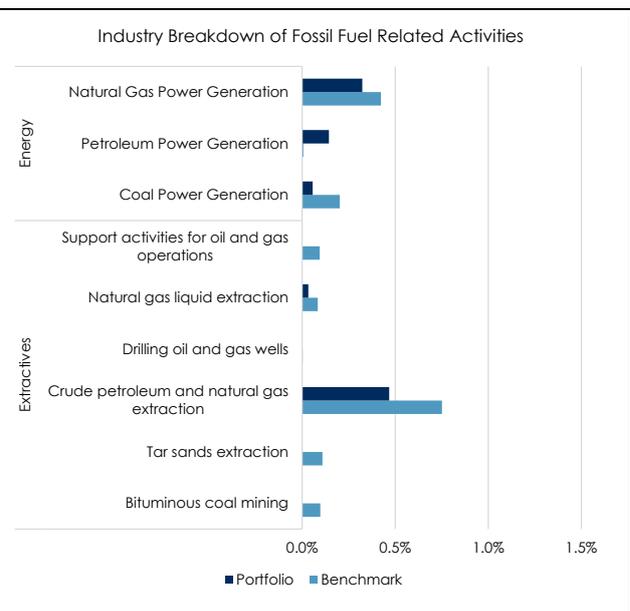
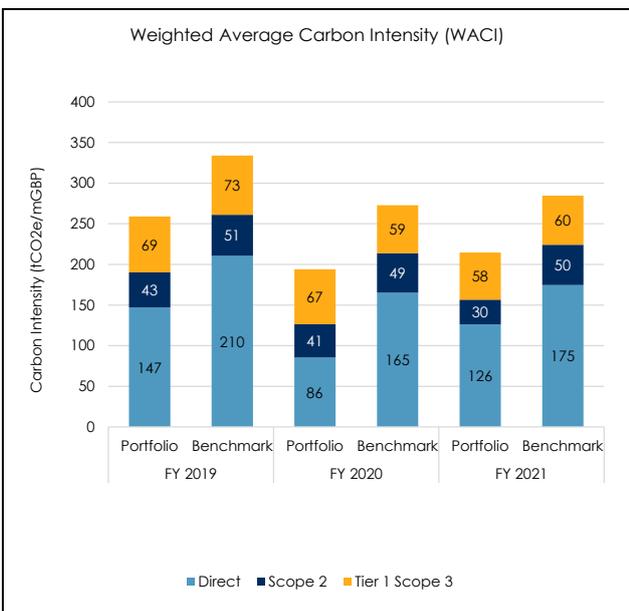
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Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Active Low Volatility vs. MSCI ACWI

Holdings as at 31st December 2021

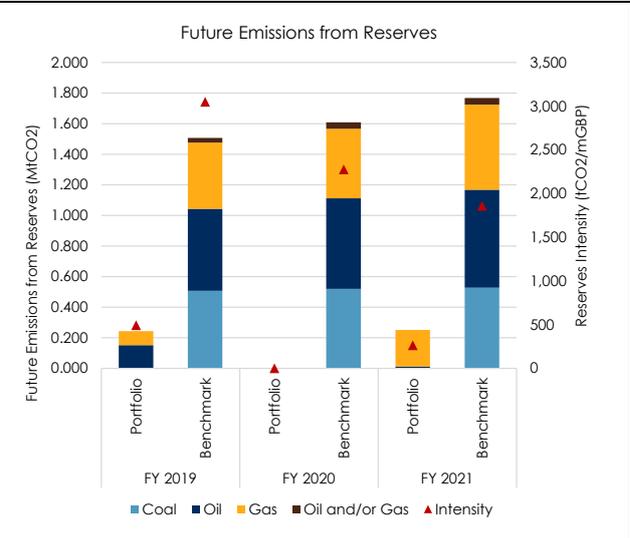
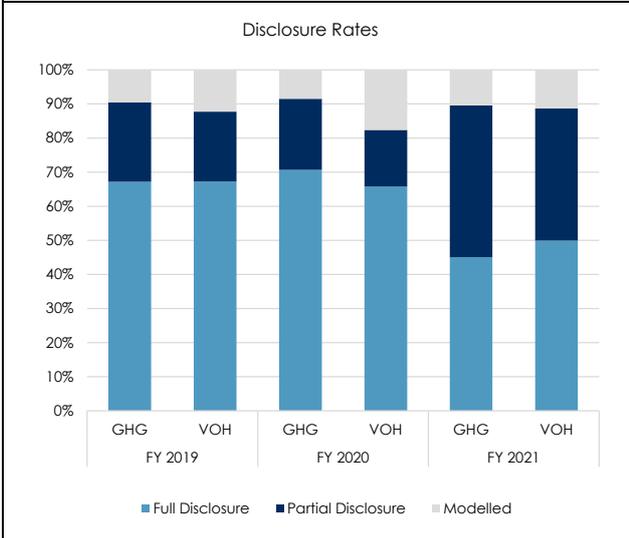


Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Waste Management, Inc.	2,891	0.74%	-9.24%
National Fuel Gas Company	1,870	0.85%	-6.59%
Dominion Energy, Inc.	3,521	0.40%	-6.14%
Canadian Utilities Limited	3,888	0.28%	-4.74%
Algonquin Power & Utilities Corp.	2,037	0.51%	-4.33%

Name	Weight (%)	Weighted FF Revenue (%)
National Fuel Gas Company	0.85%	0.34%
AltaGas Ltd.	0.58%	0.31%
Dominion Energy, Inc.	0.40%	0.15%
Hawaiian Electric Industries, Inc	0.35%	0.14%
Public Service Enterprise Group	0.16%	0.02%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	45%	50%
Partial Disclosure	45%	39%
Modelled	10%	11%

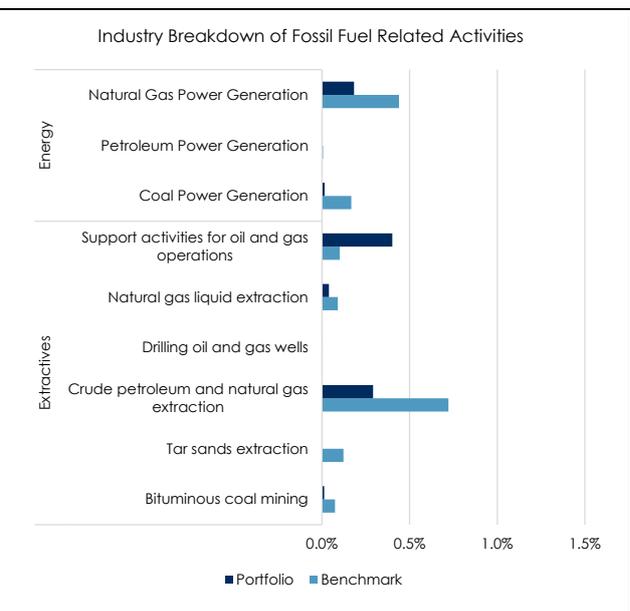
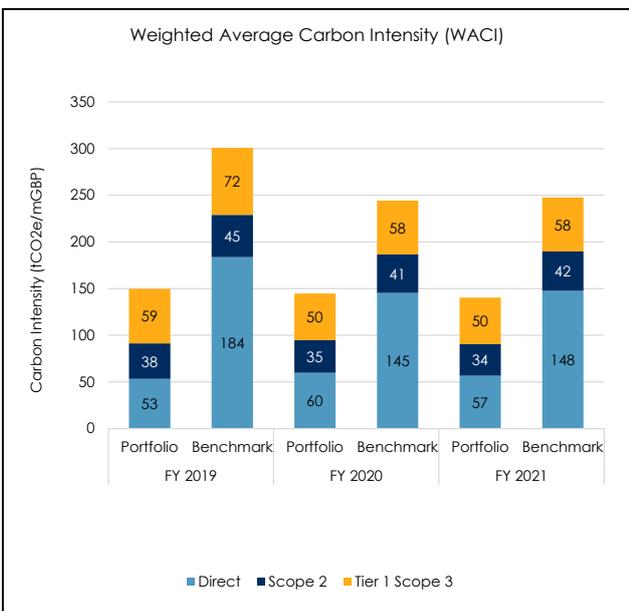
Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	0.00	0.52	0.00	0.53
Oil	0.00	0.59	0.01	0.64
Gas	0.00	0.46	0.24	0.56
Oil and/or Gas	0.00	0.04	0.00	0.04

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Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.
 The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Passive Low Carbon vs. MSCI World

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

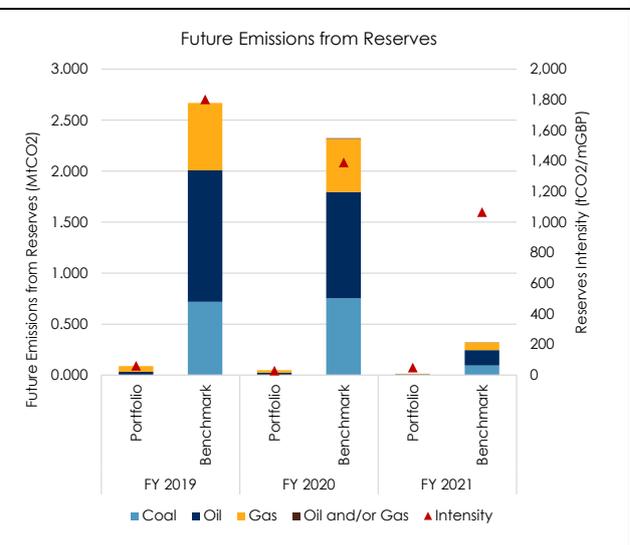
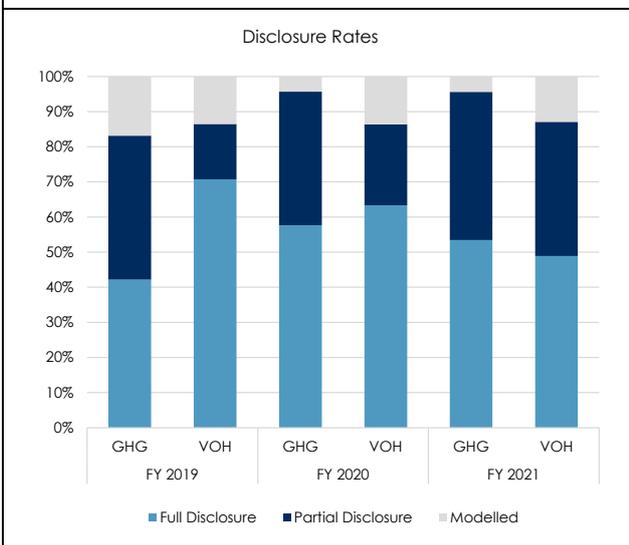
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
NextEra Energy, Inc.	3,753	0.23%	-5.97%
Kinder Morgan, Inc.	2,022	0.25%	-3.31%
Linde plc	1,977	0.19%	-2.55%
Nestle SA	590	0.64%	-2.05%
The Williams Companies, Inc.	2,214	0.12%	-1.71%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Halliburton Company	0.26%	0.27%
Pioneer Natural Resources Cor	0.22%	0.22%
NextEra Energy, Inc.	0.23%	0.11%
AltaGas Ltd.	0.18%	0.10%
Schlumberger Limited	0.20%	0.07%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	53%	49%
Partial Disclosure	42%	38%
Modelled	4%	13%

Future Emissions from Reserves by Type (MfCO₂)

Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	0.00	0.75	0.00	0.09
Oil	0.02	1.04	0.01	0.15
Gas	0.02	0.52	0.01	0.07
Oil and/or Gas	0.00	0.01	0.00	0.00

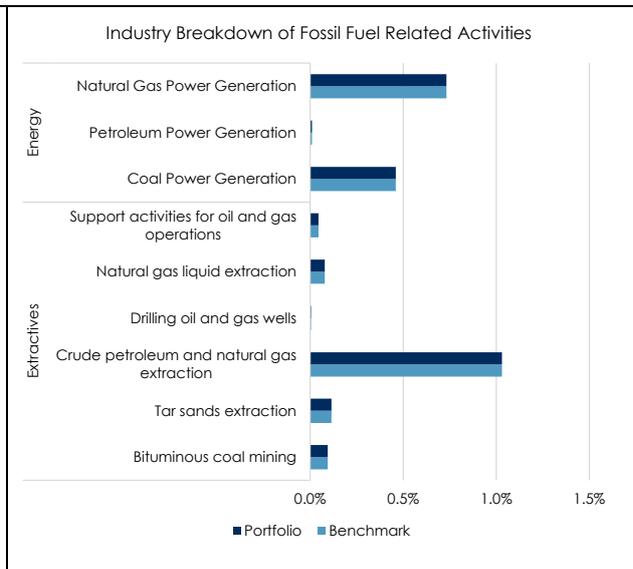
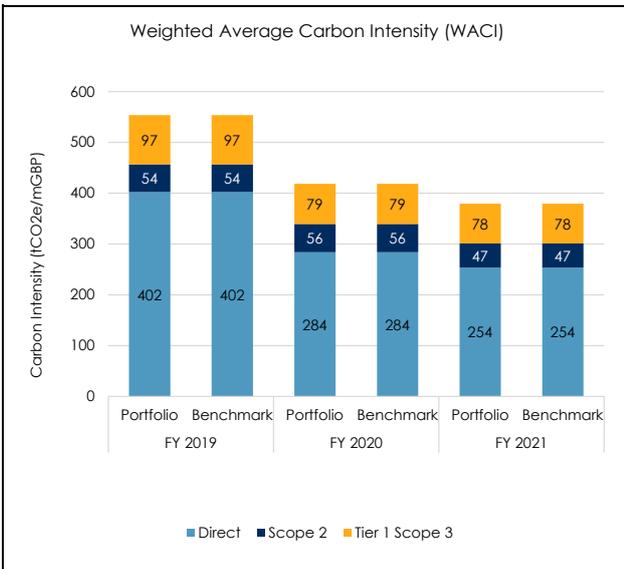
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The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Passive Smart Beta

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

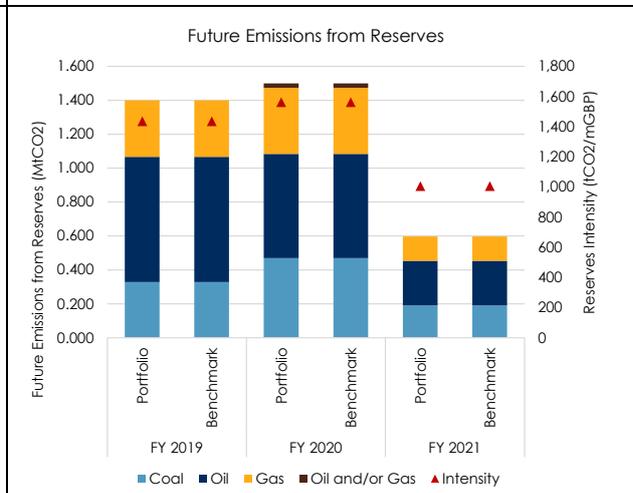
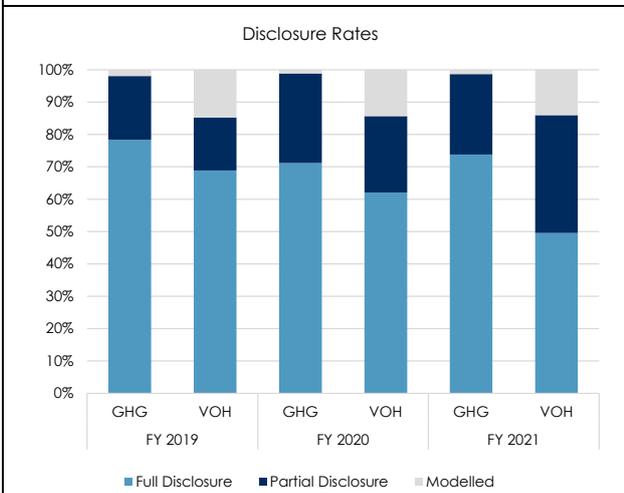
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
The Southern Company	5,264	0.45%	-5.76%
Duke Energy Corporation	4,653	0.45%	-5.07%
Ameren Corporation	6,857	0.29%	-4.89%
American Electric Power Company, Inc.	4,730	0.35%	-4.03%
Xcel Energy Inc.	5,297	0.31%	-4.03%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
ConocoPhillips	0.28%	0.28%
Duke Energy Corporation	0.45%	0.22%
Hess Corporation	0.17%	0.17%
Diamondback Energy, Inc.	0.17%	0.16%
The Southern Company	0.45%	0.16%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	74%	50%
Partial Disclosure	25%	36%
Modelled	1%	14%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	0.47	0.47	0.19	0.19
Oil	0.61	0.61	0.26	0.26
Gas	0.39	0.39	0.14	0.14
Oil and/or Gas	0.03	0.03	0.00	0.00

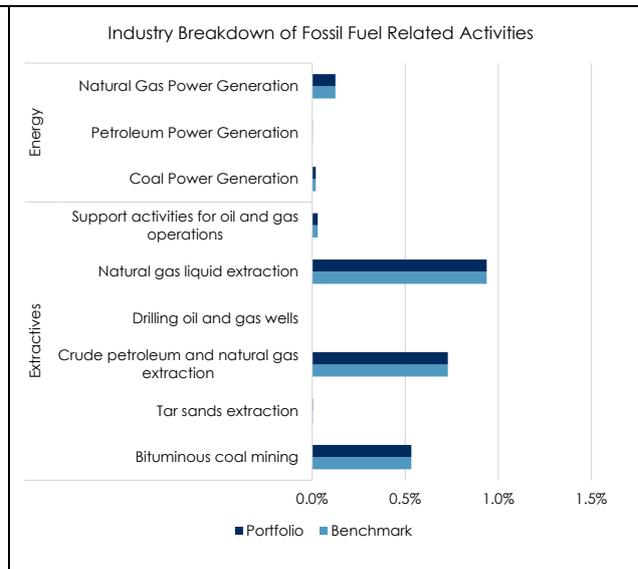
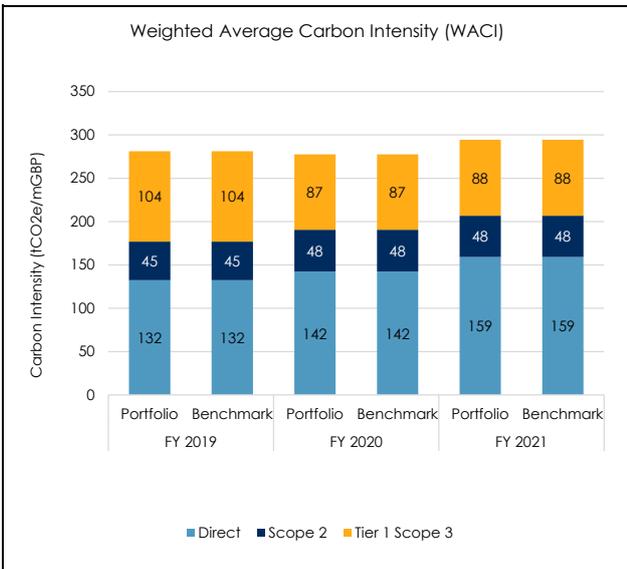
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The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the

Brunel Passive UK

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

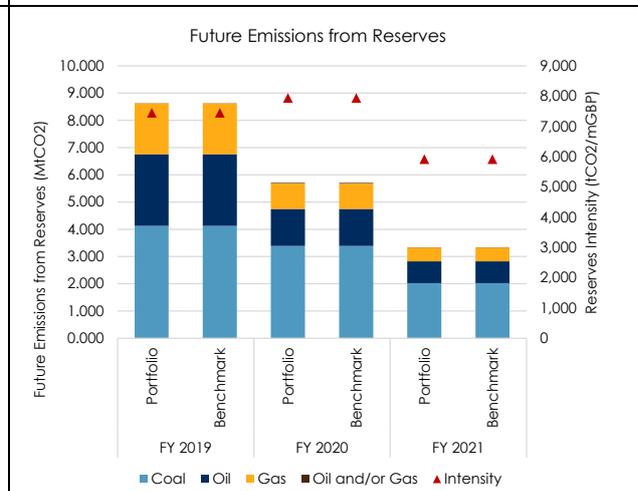
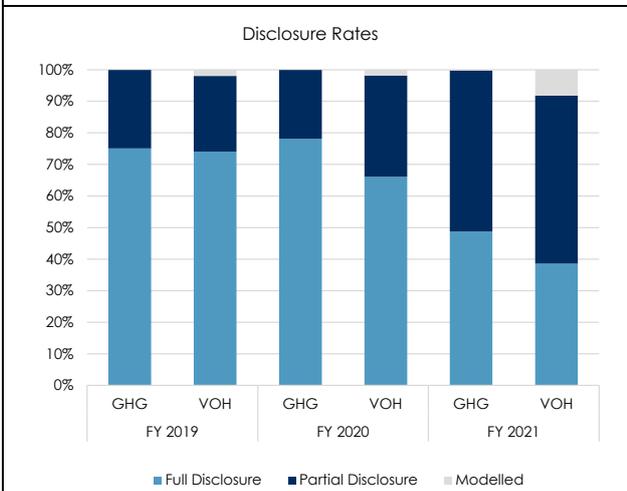
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Royal Dutch Shell PLC	911	5.03%	-11.09%
CRH Plc	2,088	1.22%	-7.52%
Rio Tinto Group	1,006	2.14%	-5.28%
BP p.l.c.	746	2.58%	-4.05%
Mondi PLC	3,396	0.36%	-3.77%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Royal Dutch Shell PLC	5.03%	1.19%
BHP Group	1.84%	0.47%
BP p.l.c.	2.58%	0.25%
Anglo American Plc	1.48%	0.19%
SSE plc	0.70%	0.11%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	49%	39%
Partial Disclosure	51%	53%
Modelled	0%	8%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	3.39	3.39	2.03	2.03
Oil	1.36	1.36	0.80	0.80
Gas	0.93	0.93	0.51	0.51
Oil and/or Gas	0.02	0.02	0.01	0.01

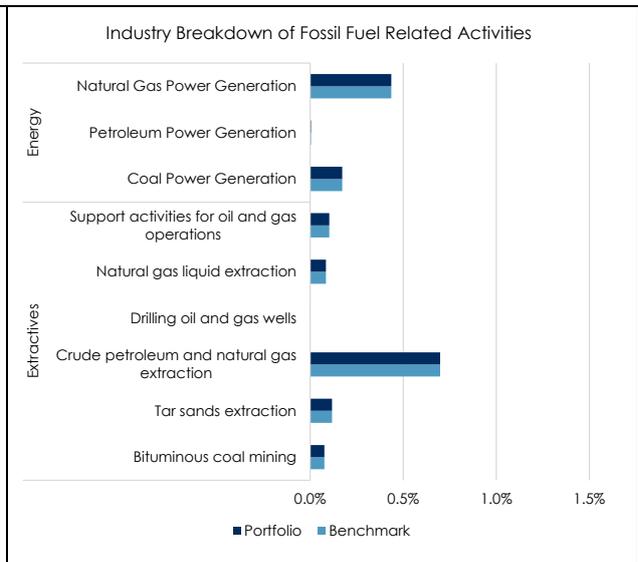
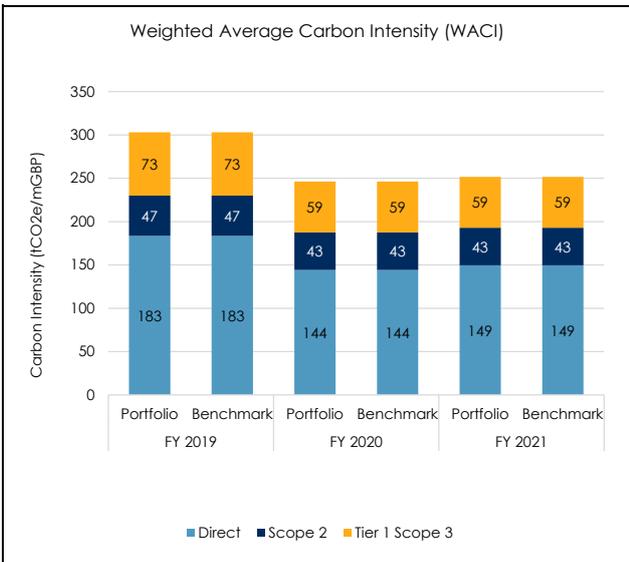
Full Disclosure - Data disclosed by a company in an un-edited form.
Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
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The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the

Brunel Passive World Developed

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

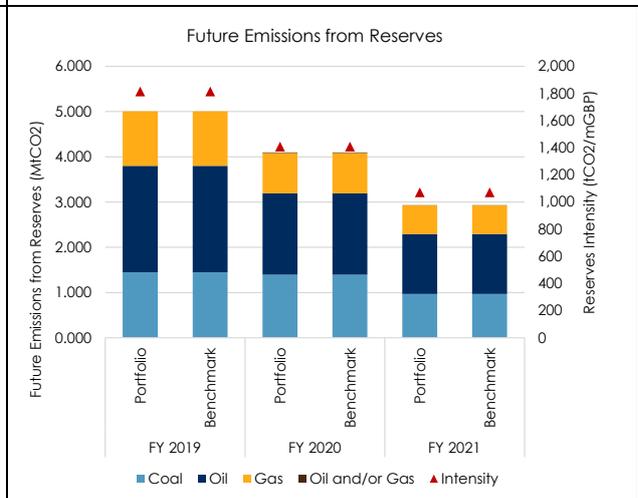
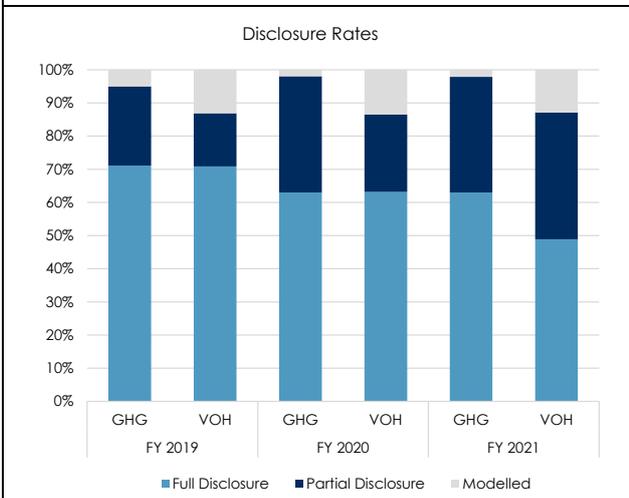
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
NextEra Energy, Inc.	3,753	0.29%	-4.03%
The Southern Company	5,264	0.11%	-2.28%
Duke Energy Corporation	4,653	0.13%	-2.23%
Linde plc	1,977	0.28%	-1.94%
Exxon Mobil Corporation	1,245	0.41%	-1.62%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
ConocoPhillips	0.15%	0.15%
NextEra Energy, Inc.	0.29%	0.14%
Chevron Corporation	0.36%	0.10%
EOG Resources, Inc.	0.08%	0.08%
Canadian Natural Resources Li	0.08%	0.08%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	63%	49%
Partial Disclosure	35%	38%
Modelled	2%	13%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	1.40	1.40	0.97	0.97
Oil	1.80	1.80	1.32	1.32
Gas	0.89	0.89	0.63	0.63
Oil and/or Gas	0.01	0.01	0.00	0.00

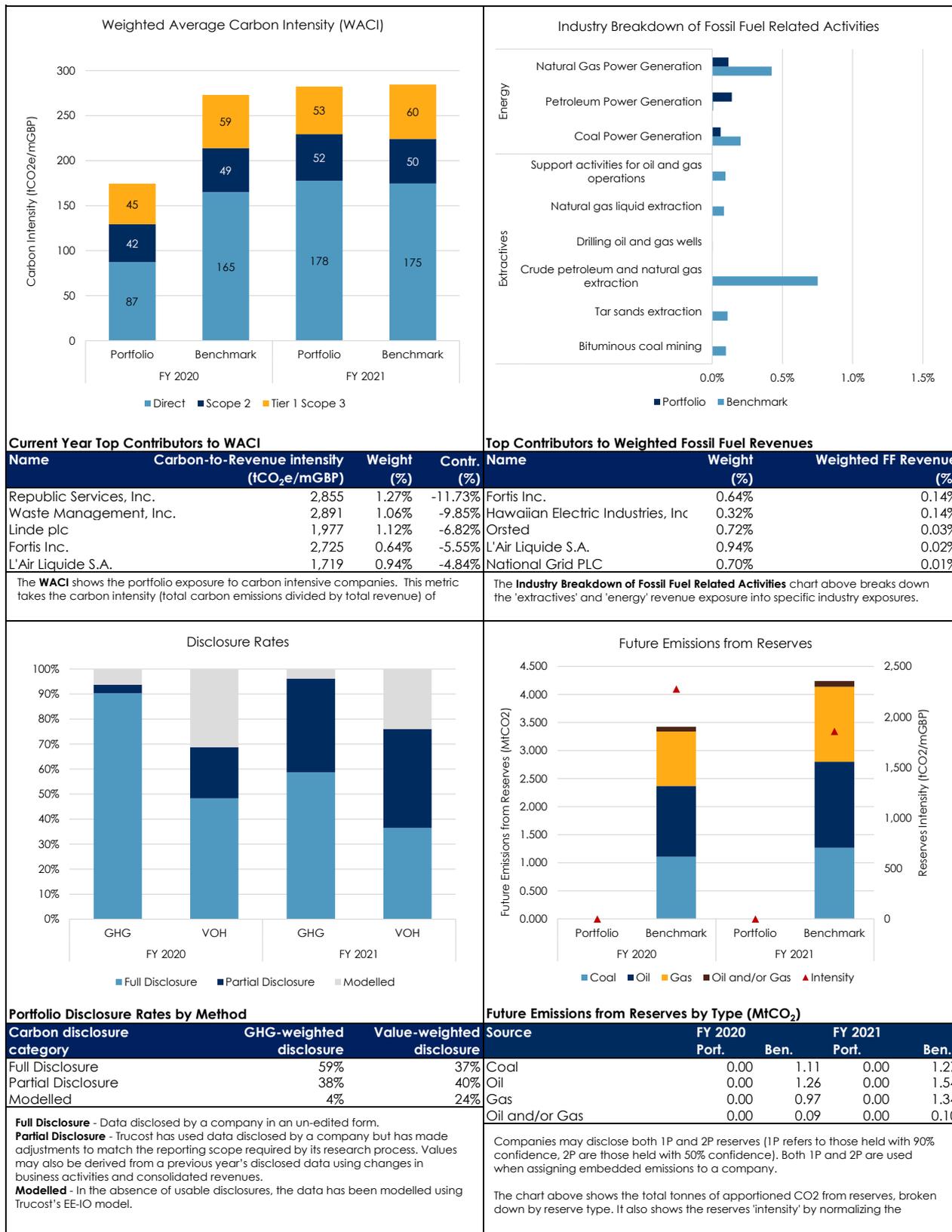
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Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the

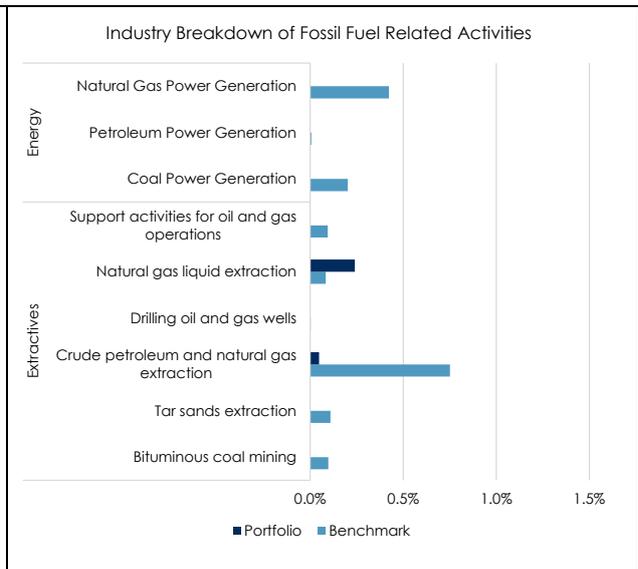
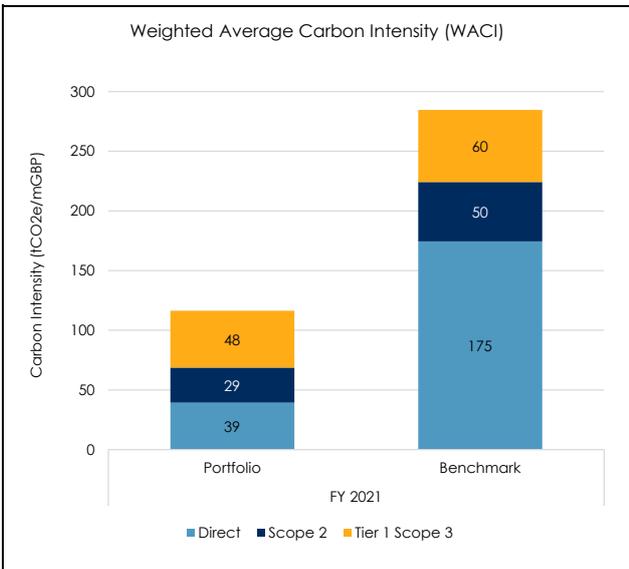
Brunel Global Sustainable Portfolio vs. MSCI ACWI

Holdings as at 31st December 2021



Brunel Core Global Equities vs. MSCI ACWI

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

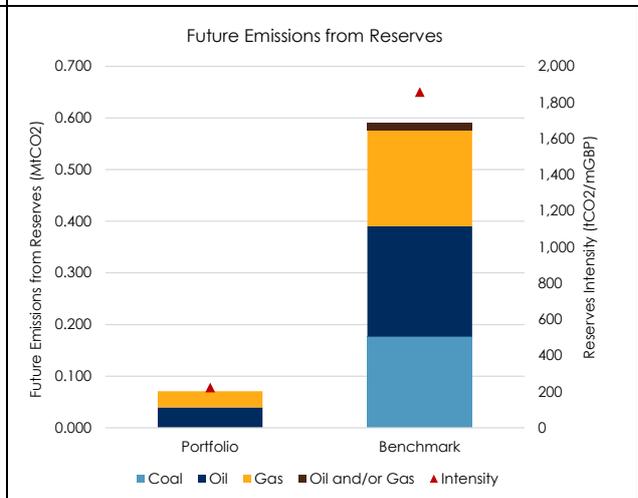
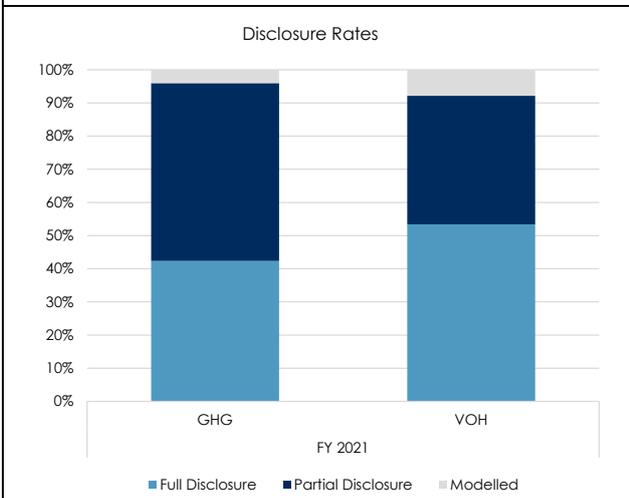
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Norfolk Southern Corporation	639	2.05%	-9.39%
Royal Dutch Shell PLC	911	1.30%	-9.02%
Novozymes A/S	649	1.50%	-6.98%
Abbott Laboratories	283	3.52%	-5.24%
Associated British Foods plc	863	0.77%	-5.01%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Royal Dutch Shell PLC	1.30%	0.29%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	42%	53%
Partial Disclosure	54%	39%
Modelled	4%	8%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	NA	NA	0.00	0.18
Oil	NA	NA	0.04	0.21
Gas	NA	NA	0.03	0.19
Oil and/or Gas	NA	NA	0.00	0.01

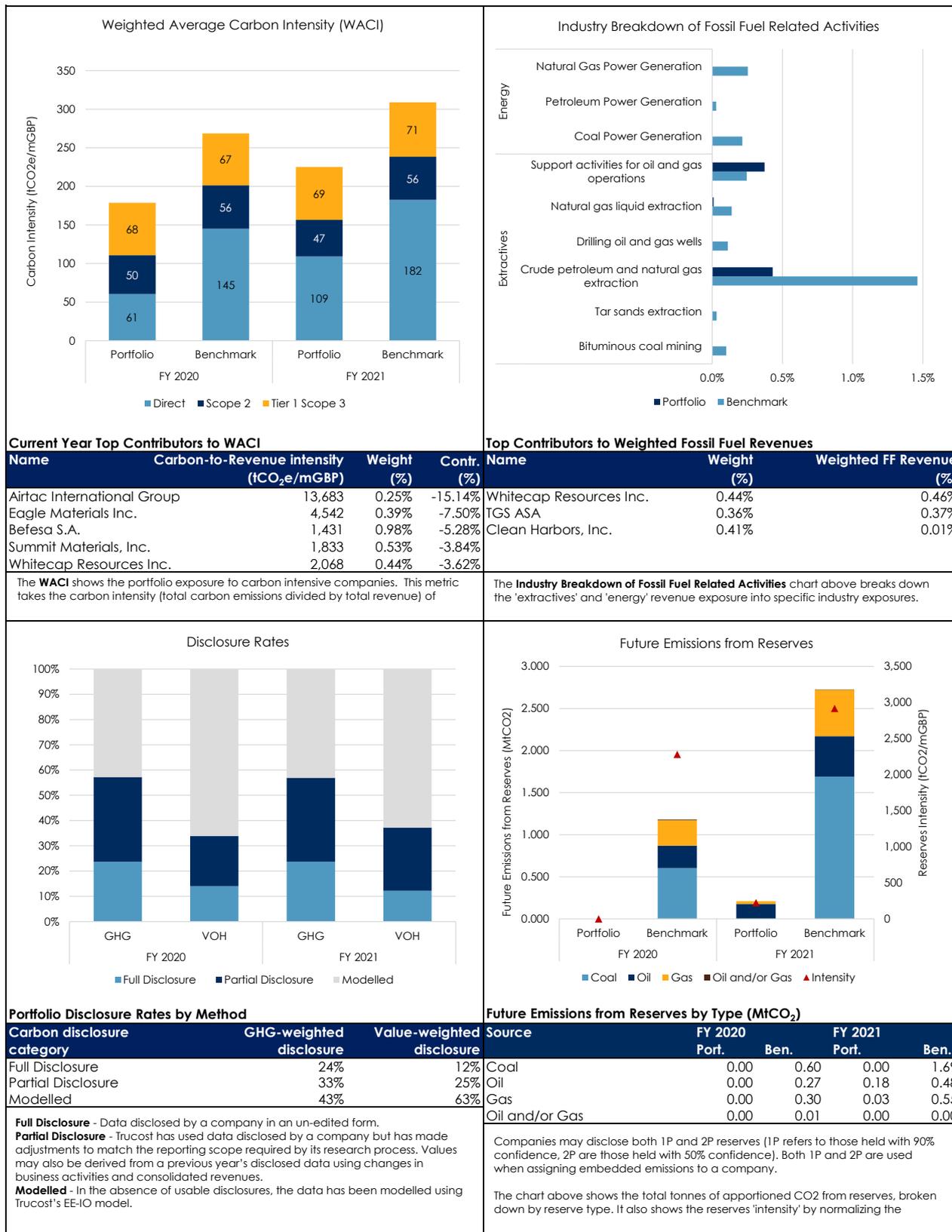
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Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the

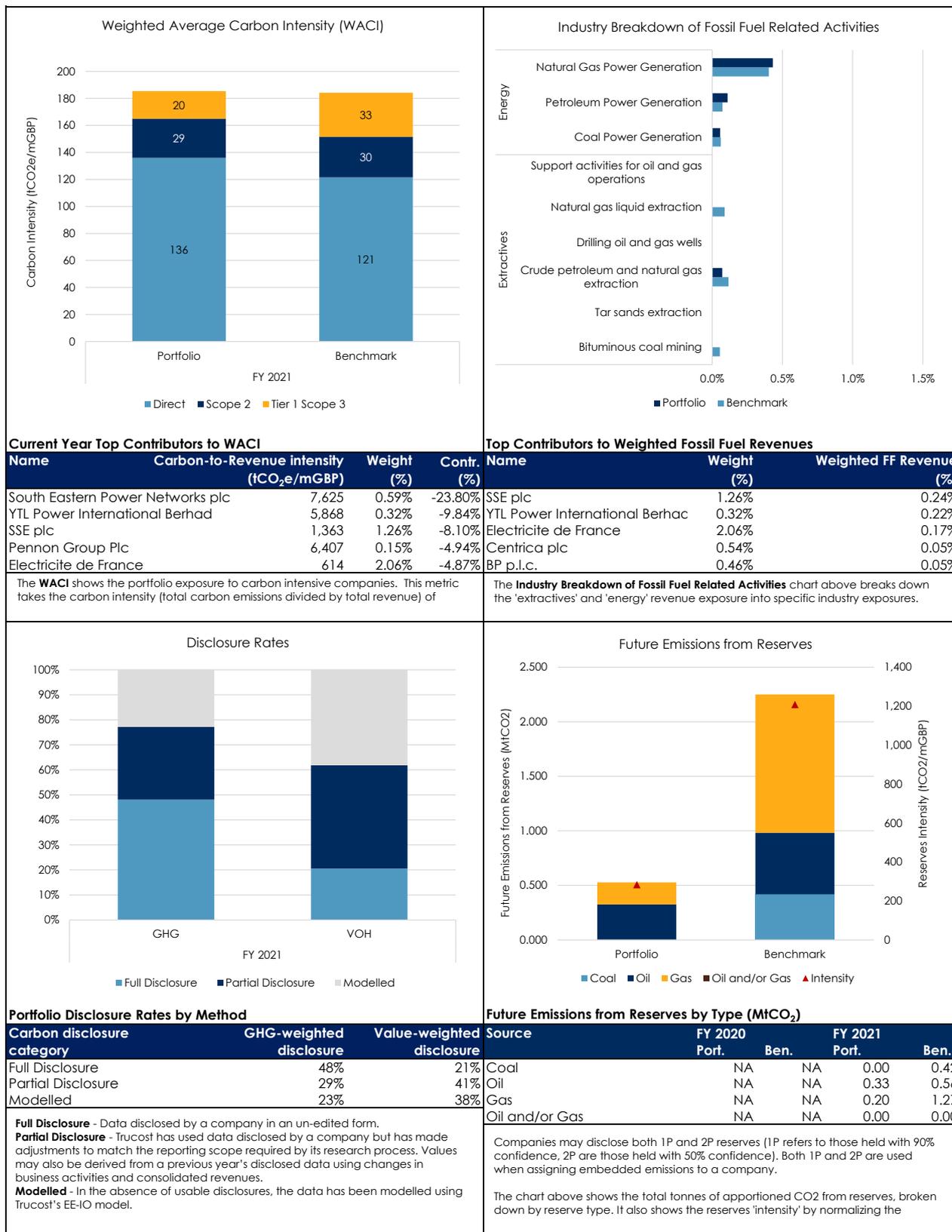
Brunel Smaller Companies vs. MSCI World Small Cap

Holdings as at 31st December 2021



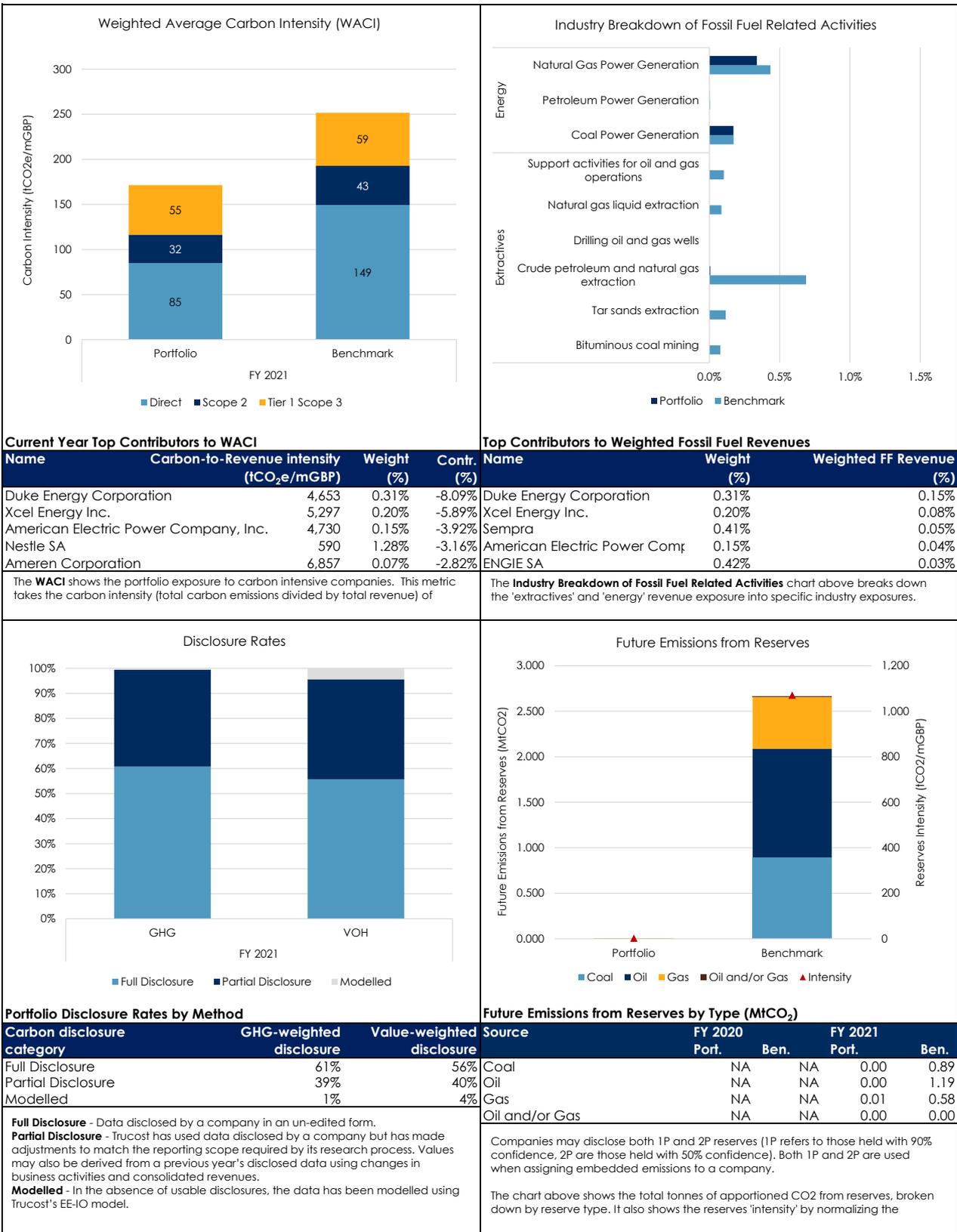
Brunel Sterling Corporate Bond Fund vs. iboxx £ Non-Gilts

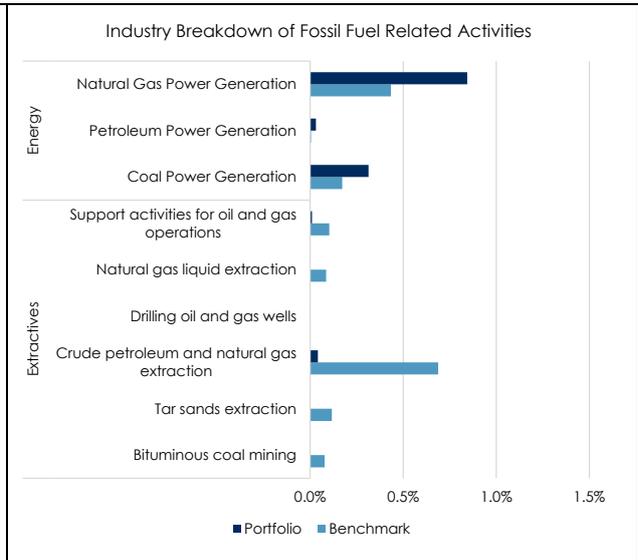
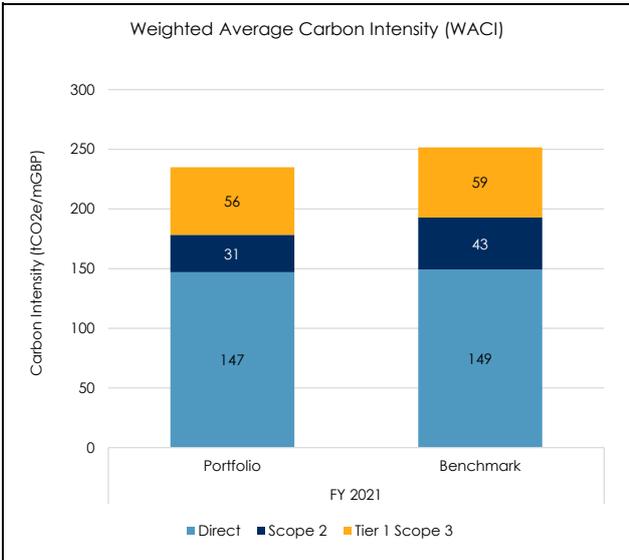
Holdings as at 31st December 2021



Brunel Paris Aligned World Developed Equity Index vs. FTSE World Developed

2021 Q4





Current Year Top Contributors to WACI

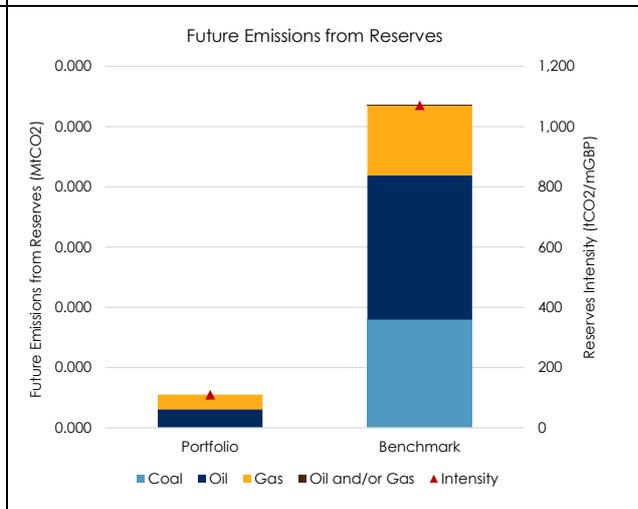
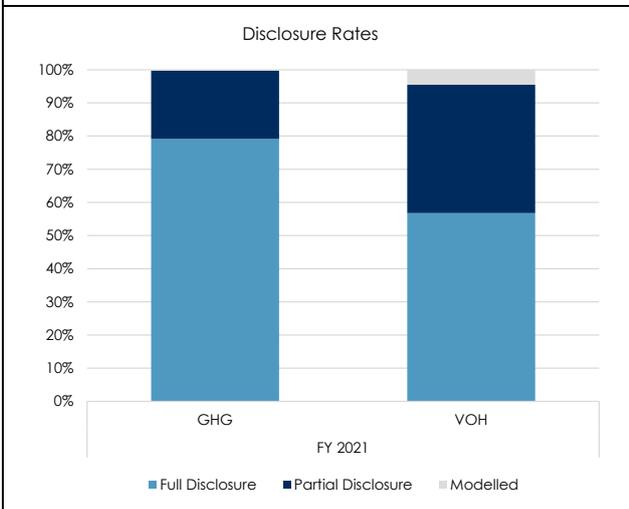
Name	Carbon-to-Revenue Intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Dominion Energy, Inc.	3,521	1.01%	-14.30%
The Southern Company	5,264	0.25%	-5.34%
Duke Energy Corporation	4,653	0.25%	-4.75%
Xcel Energy Inc.	5,297	0.15%	-3.31%
Enel SpA	1,017	0.83%	-2.79%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Dominion Energy, Inc.	1.01%	0.37%
Duke Energy Corporation	0.25%	0.12%
The Southern Company	0.25%	0.09%
Enel SpA	0.83%	0.08%
Xcel Energy Inc.	0.15%	0.06%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

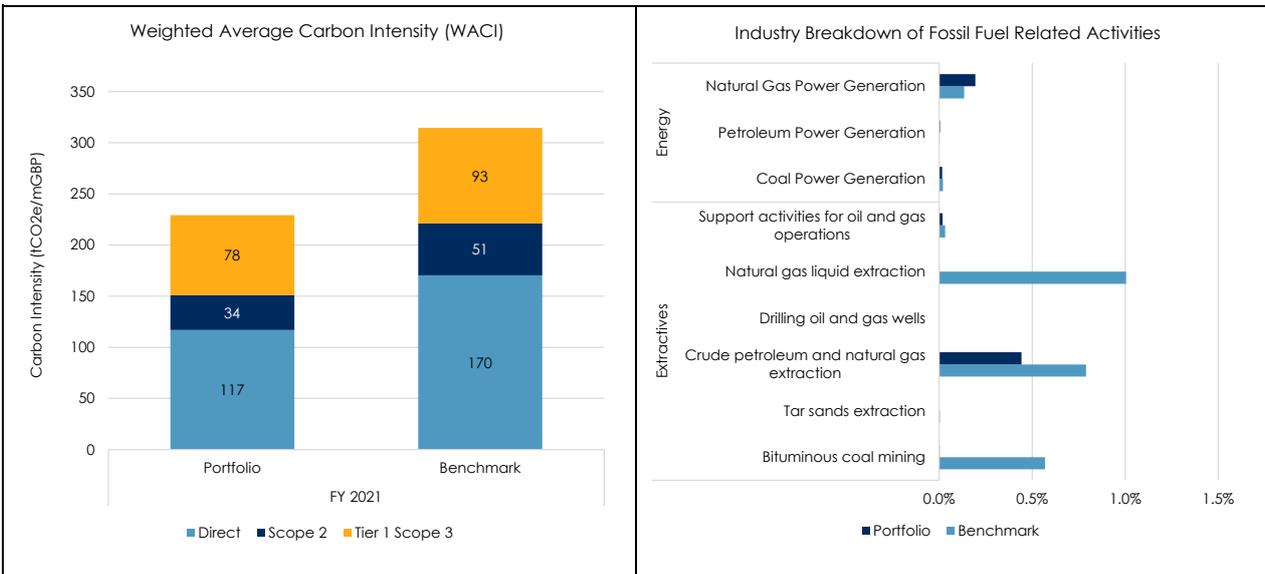
Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	79%	57%
Partial Disclosure	21%	39%
Modelled	0%	5%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	NA	NA	0.00	0.00
Oil	NA	NA	0.00	0.00
Gas	NA	NA	0.00	0.00
Oil and/or Gas	NA	NA	0.00	0.00

Full Disclosure - Data disclosed by a company in an un-edited form.
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 The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the



Current Year Top Contributors to WACI

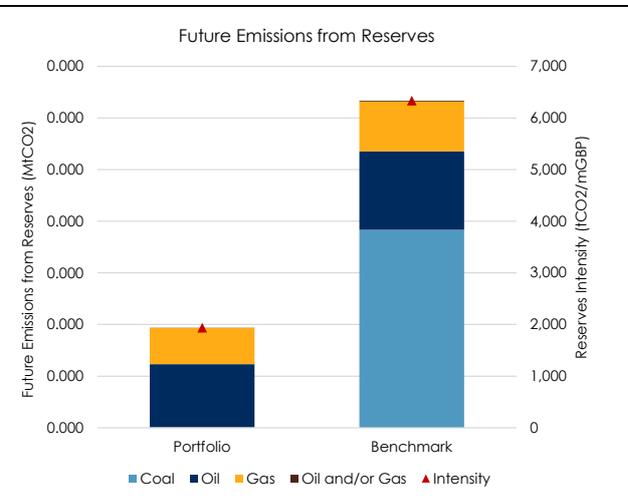
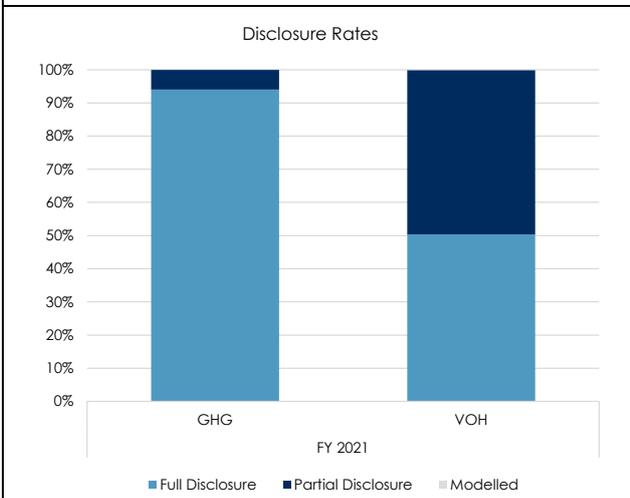
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
CRH Plc	2,088	2.74%	-22.81%
BP p.l.c.	746	3.53%	-8.23%
National Grid PLC	537	5.51%	-7.82%
Croda International Plc	565	4.91%	-7.57%
SSE plc	1,363	0.96%	-4.80%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
BP p.l.c.	3.53%	0.32%
SSE plc	0.96%	0.15%
Energean plc	0.10%	0.10%
National Grid PLC	5.51%	0.06%
Centrica plc	0.39%	0.03%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	94%	50%
Partial Disclosure	6%	50%
Modelled	0%	0%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	NA	NA	0.00	0.00
Oil	NA	NA	0.00	0.00
Gas	NA	NA	0.00	0.00
Oil and/or Gas	NA	NA	0.00	0.00

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The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the

Holdings as at 31st December 2021

Key Info:	AUM in mGBP: 3,669	Coverage: 98%	18/08/2022
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The Devon Aggregate Portfolio

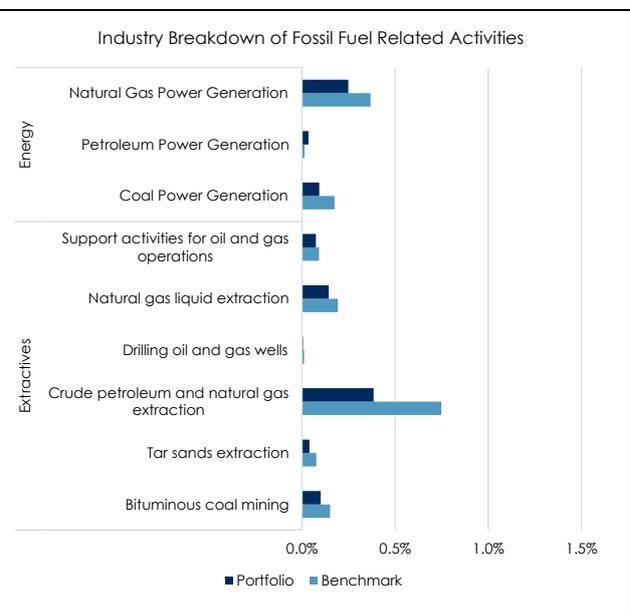
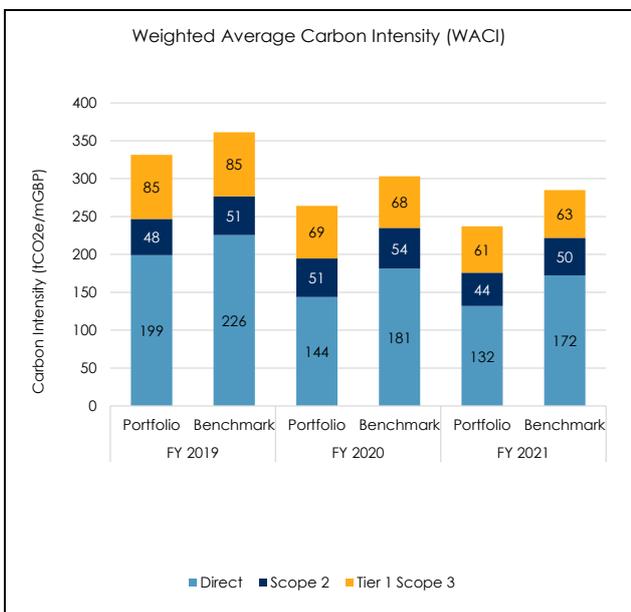
- This report illustrates key Carbon Metrics for the Devon Aggregate Portfolio, the associated underlying Brunel Sub-Portfolios, as well as all legacy portfolios if any.
- The Devon Aggregate Portfolio is made up of Brunel Sub-Portfolio's, weighted by investments as of 31 December 2021.
- A custom Strategic Benchmark has been used so that the Devon Aggregate Portfolio can be measured against a meaningful comparator. This is made up of the individual benchmarks from the Brunel Sub-Portfolios and weighted accordingly, as of 31 December 2021.

Performance Summary

- The Weighted Average Carbon Intensity (WACI) of the Devon Aggregate Portfolio is below its Strategic Benchmark, with a relative efficiency of +16%.
- There has been a 11.8% reduction in the WACI from 2020 to 2021 for the Devon Aggregate Portfolio.
- Of the Brunel Sub-Portfolios within the Aggregate, the highest intensity was the Brunel Emerging Markets (383 tCO₂e/mGBP), while the lowest was the Brunel Global High Alpha (149 tCO₂e/mGBP).
- All Sub-Portfolios but Brunel Sterling Corporate Bond Fund have lower levels of carbon intensity compared to their respective benchmarks.
- The Devon Aggregate Portfolio is less exposed to both fossil fuel revenues (1.12% vs 1.82%) and future emissions from reserves (5.00 MtCO₂ vs 9.18 MtCO₂) than its Strategic Benchmark.
- The company disclosures rates are based on Scope 1 emissions, where 52% of companies within the Devon Aggregate Portfolio have fully disclosed carbon data by carbon weighted method, and 40% by investment weighted method. The Trucost methodology for this carbon disclosure metric has been updated from last year in order to reflect more granular disclosures. Companies must now be disclosing emissions across the different Kyoto protocol gases in order to be classified as 'full disclosure', whereas previously only an aggregate emissions figure was required.
- The aggregate rate of Full Disclosure was highest in the Brunel Paris Aligned World Developed Equity Index (56%) and lowest in the Brunel Smaller Companies Portfolio (12%) by investment weighted method.
- Absolute carbon emissions is a new metric we have included in this year's carbon metrics report. The measure refers to the total carbon emissions allocated to the portfolio in absolute terms and the higher percentage holding in a company within a portfolio, the more of its emissions are 'owned'. Absolute emissions for different Portfolios cannot be compared on a like for like basis because the data is not normalised and the size of the portfolio can skew the results.

Devon Aggregate vs. Devon Custom BM

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

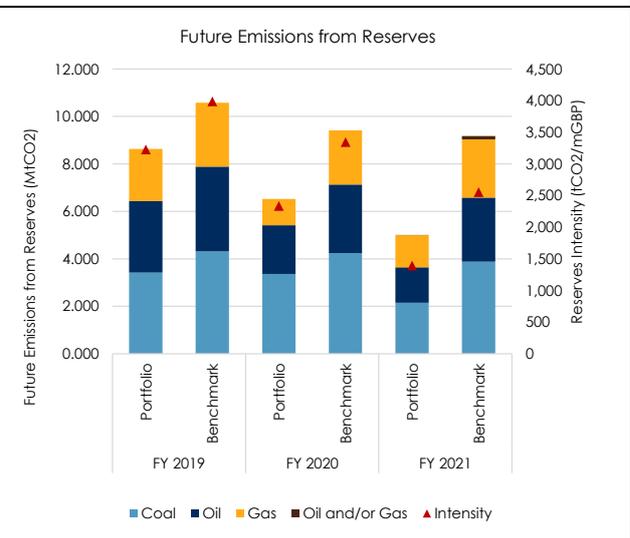
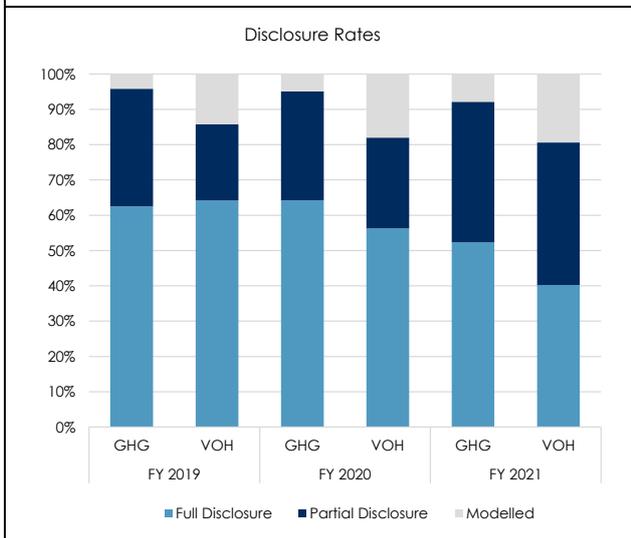
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Waste Management, Inc.	2,891	0.18%	-1.99%
Airtac International Group	13,683	0.04%	-1.99%
Royal Dutch Shell PLC	911	0.69%	-1.98%
South Eastern Power Networks plc	7,625	0.05%	-1.50%
CRH Plc	2,088	0.19%	-1.46%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Royal Dutch Shell PLC	0.69%	0.16%
BHP Group	0.29%	0.07%
Whitecap Resources Inc.	0.04%	0.04%
Anglo American Plc	0.31%	0.04%
ConocoPhillips	0.04%	0.04%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	52%	40%
Partial Disclosure	40%	40%
Modelled	8%	19%

Future Emissions from Reserves by Type (MtCO₂)

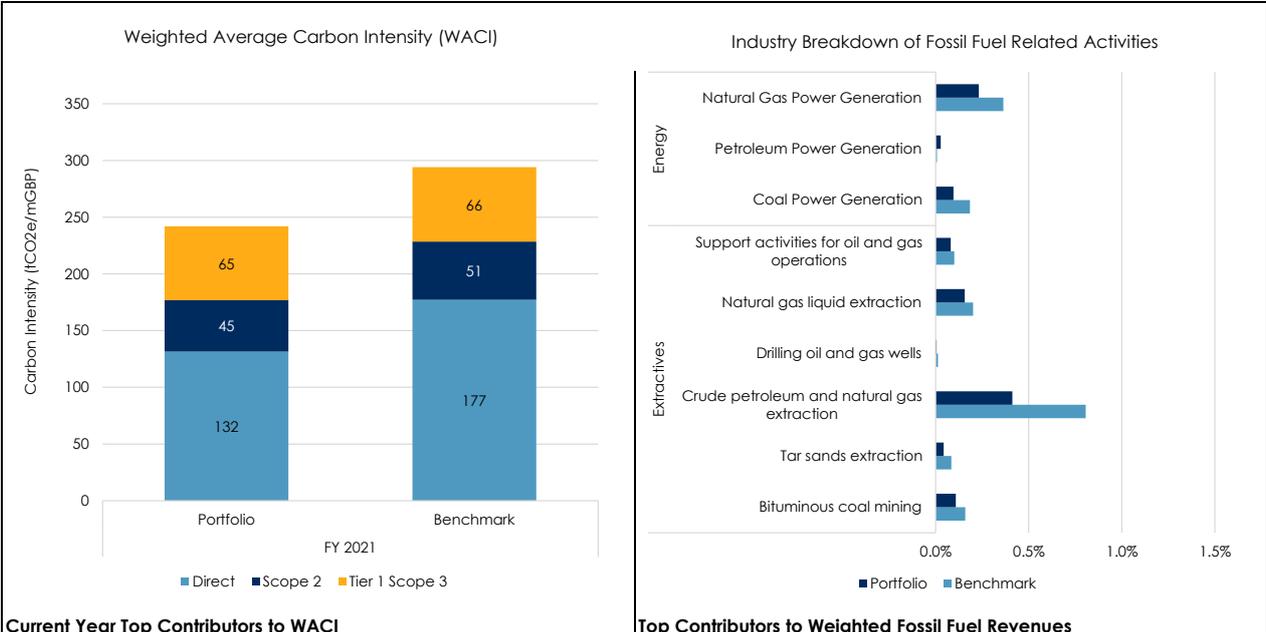
Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	3.36	4.24	2.15	3.88
Oil	2.05	2.89	1.49	2.71
Gas	1.10	2.28	1.35	2.45
Oil and/or Gas	0.16	0.17	0.01	0.14

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Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.
 The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Devon Aggregate - Equities Only vs. Devon Equities Custom BM

2021 Q4



Current Year Top Contributors to WACI

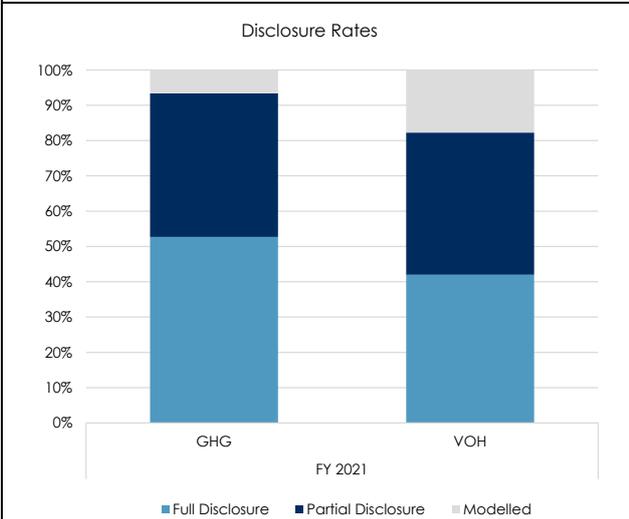
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Airtac International Group	13,683	0.04%	-2.13%
Waste Management, Inc.	2,891	0.19%	-2.12%
Royal Dutch Shell PLC	911	0.75%	-2.10%
CRH Plc	2,088	0.20%	-1.56%
Republic Services, Inc.	2,855	0.14%	-1.47%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Royal Dutch Shell PLC	0.75%	0.17%
BHP Group	0.31%	0.08%
Whitecap Resources Inc.	0.04%	0.04%
Anglo American Plc	0.34%	0.04%
ConocoPhillips	0.04%	0.04%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

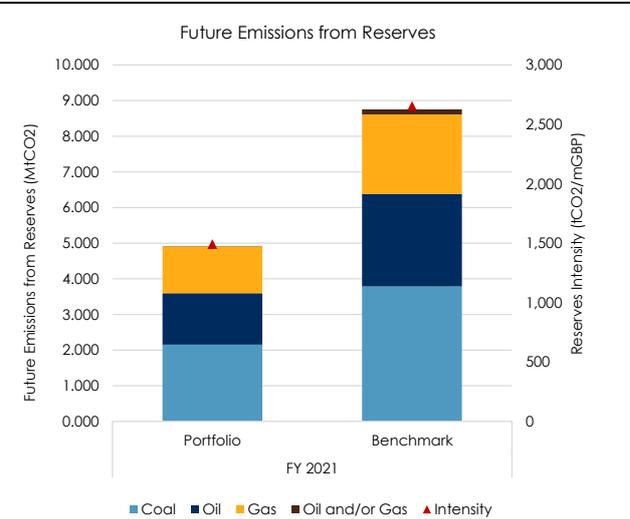
The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	53%	42%
Partial Disclosure	41%	40%
Modelled	7%	18%

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Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.



Future Emissions from Reserves by Type (MtCO₂)

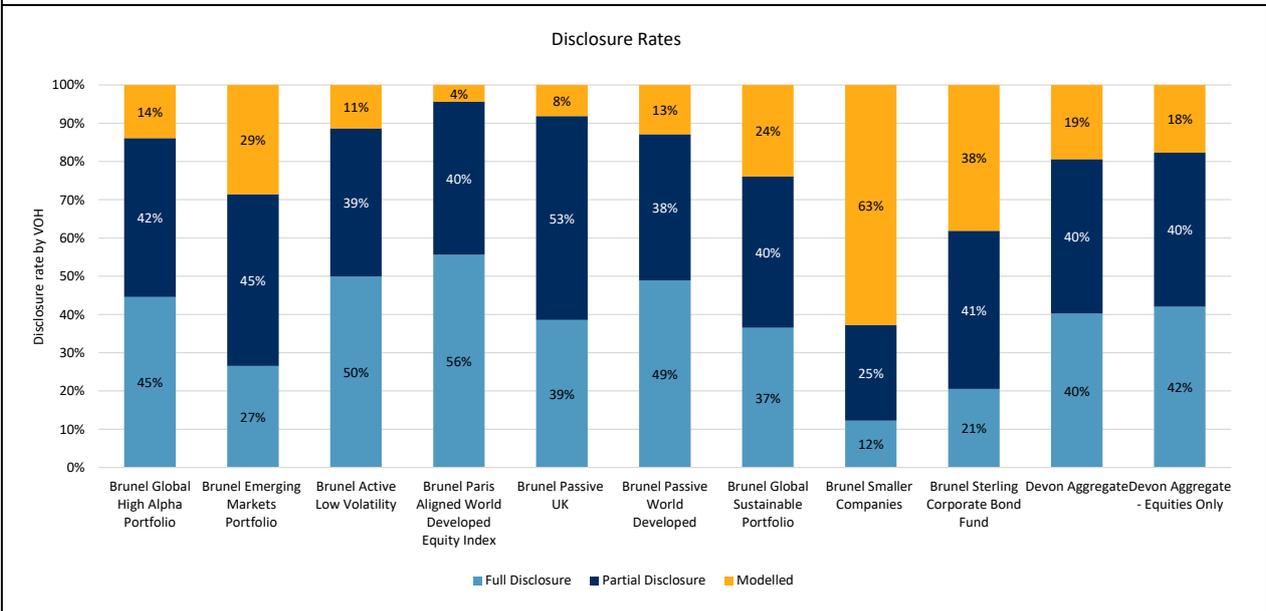
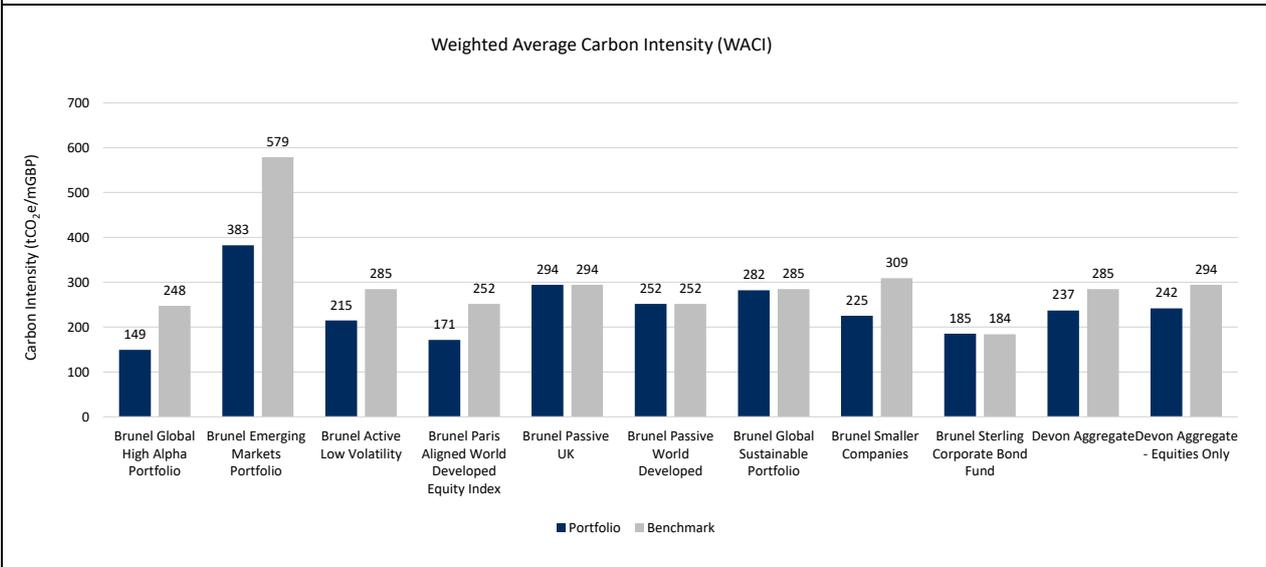
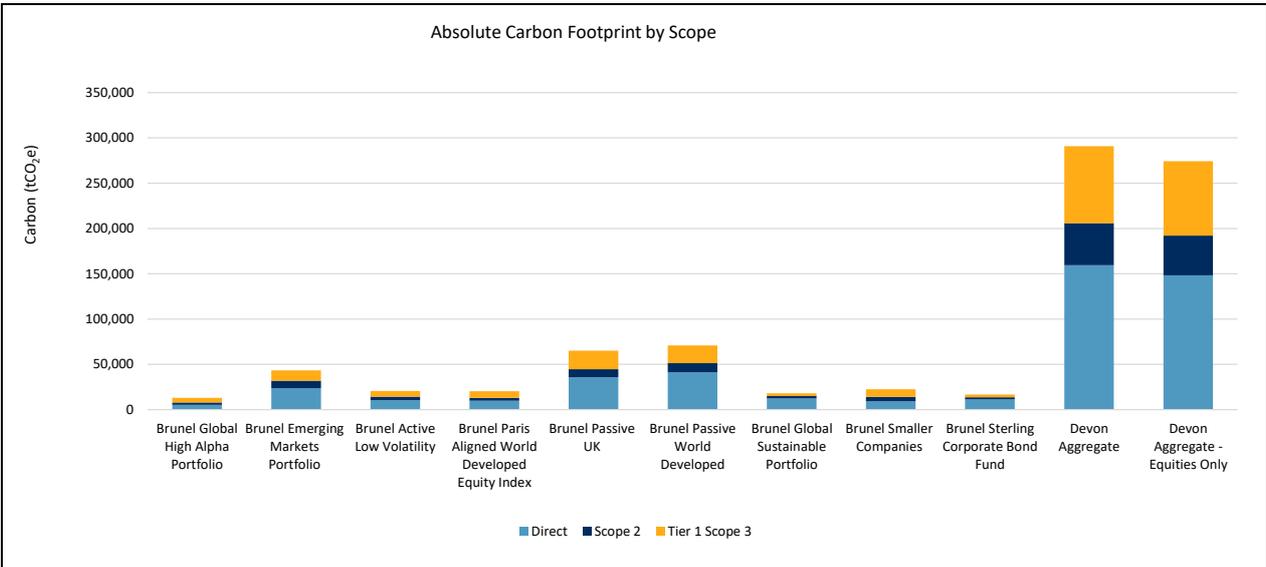
Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	NA	NA	2.15	3.79
Oil	NA	NA	1.44	2.60
Gas	NA	NA	1.32	2.23
Oil and/or Gas	NA	NA	0.01	0.14

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

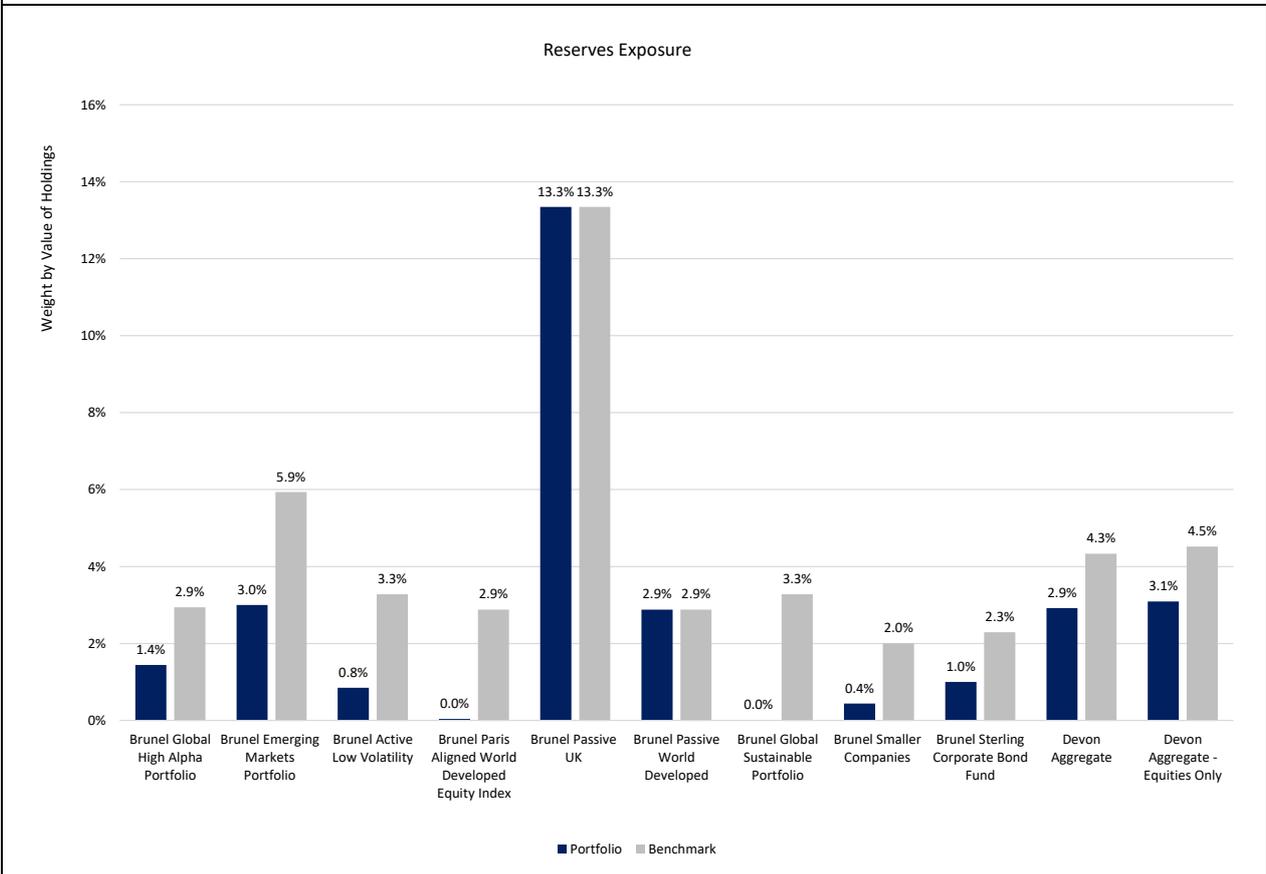
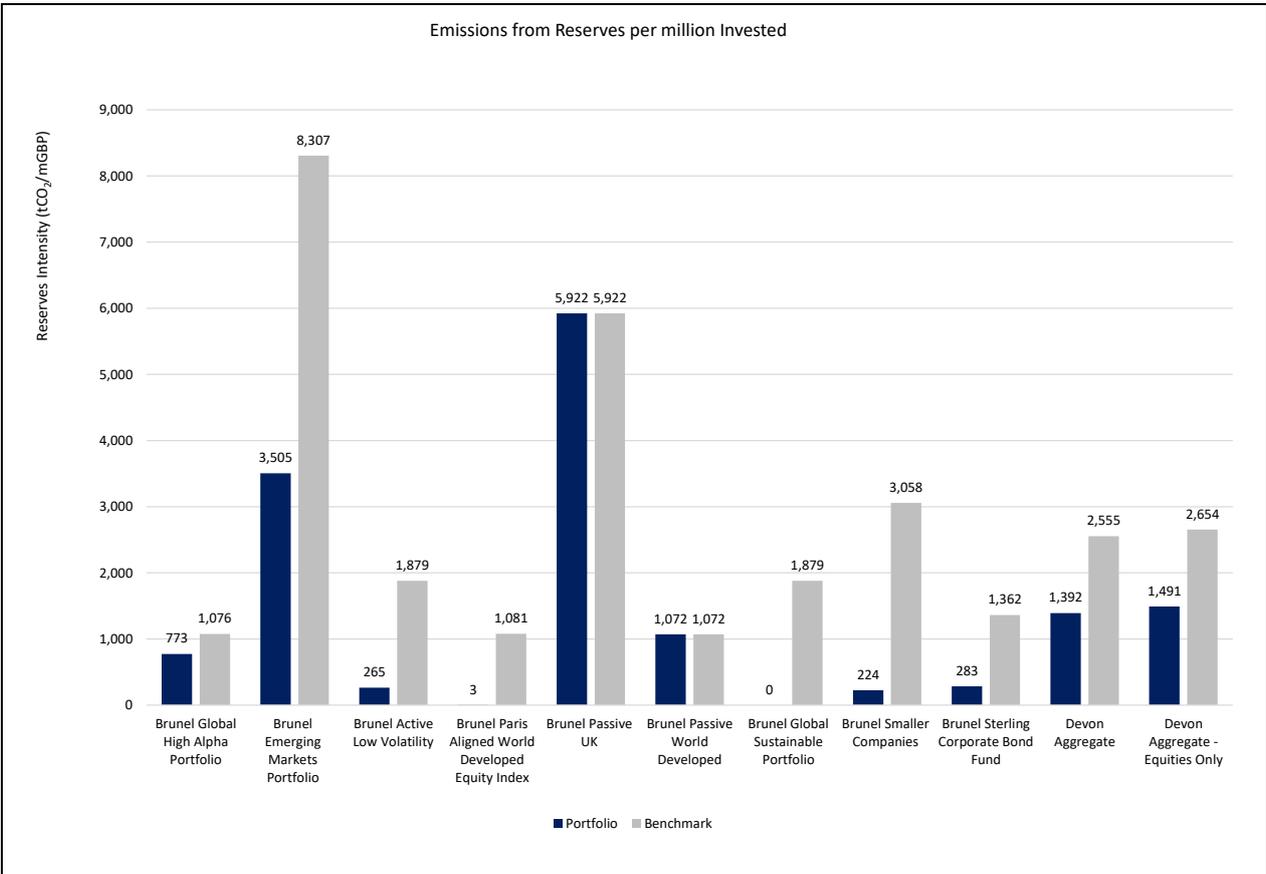
Summary Sheet

Holdings as at 31st December 2021



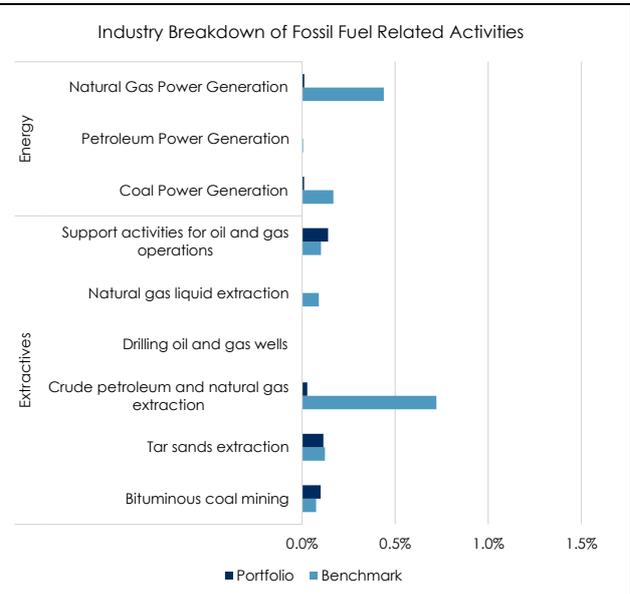
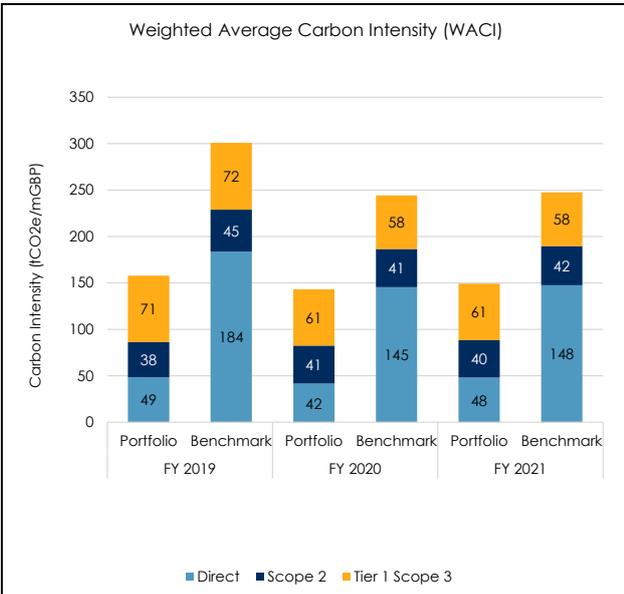
Summary Sheet

Holdings as at 31st December 2021



Brunel Global High Alpha Portfolio vs. MSCI World

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

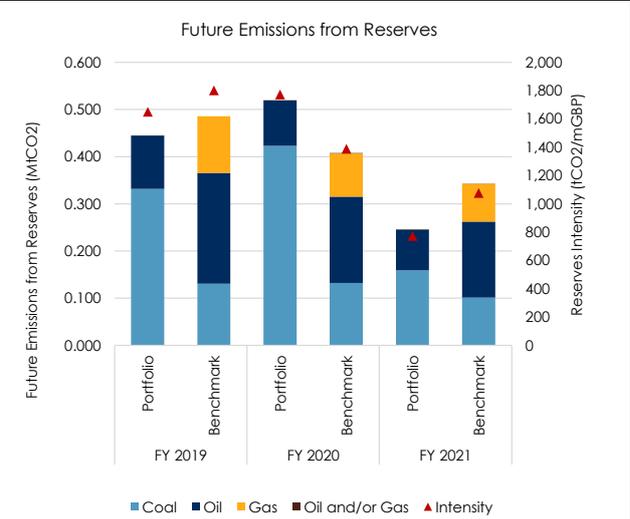
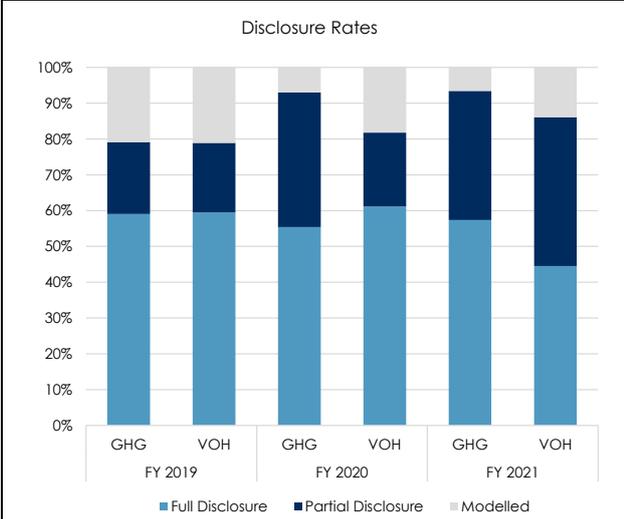
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Holcim Ltd	7,263	0.22%	-10.28%
Nestle SA	590	1.91%	-5.75%
InterContinental Hotels Group Plc	1,472	0.55%	-4.94%
Steel Dynamics, Inc.	1,083	0.69%	-4.36%
Suncor Energy Inc.	1,846	0.37%	-4.19%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Suncor Energy Inc.	0.37%	0.15%
Halliburton Company	0.14%	0.14%
Anglo American Plc	0.74%	0.09%
Berkshire Hathaway Inc.	0.75%	0.02%
Glencore Plc	0.33%	0.01%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	57%	45%
Partial Disclosure	36%	42%
Modelled	7%	14%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	0.42	0.13	0.16	0.10
Oil	0.10	0.18	0.09	0.16
Gas	0.00	0.09	0.00	0.08
Oil and/or Gas	0.00	0.00	0.00	0.00

Full Disclosure - Data disclosed by a company in an un-edited form.

Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.

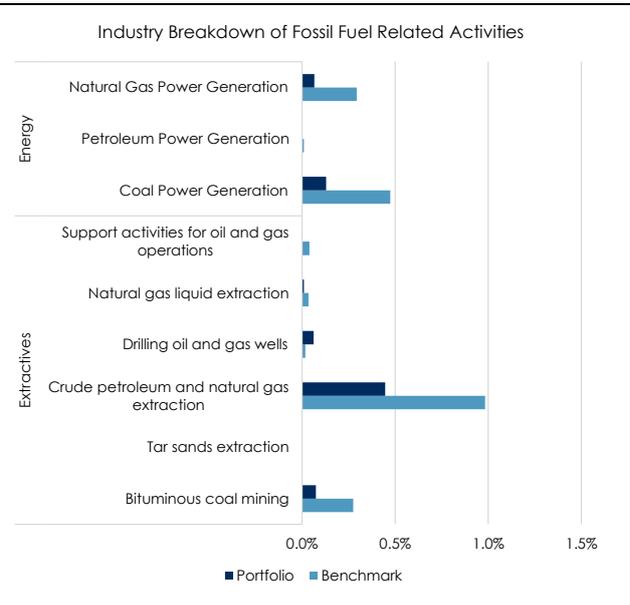
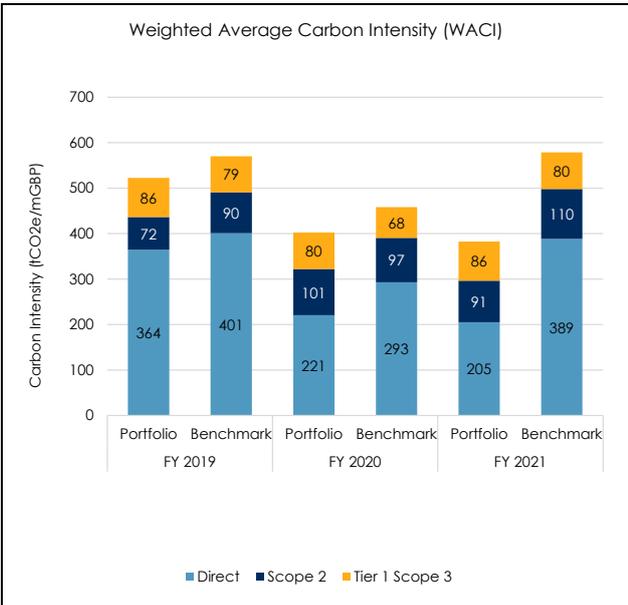
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Emerging Markets Portfolio vs. MSCI Emerging Markets

2021 Q4

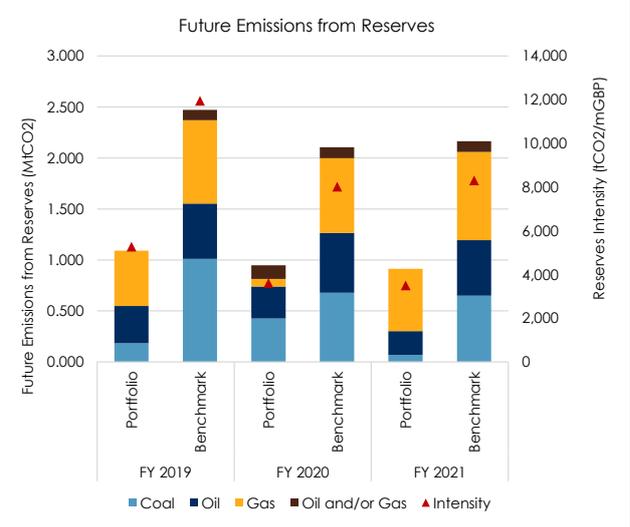
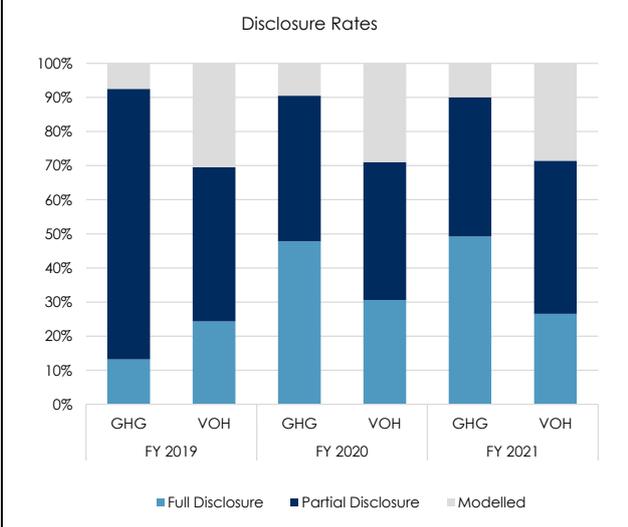


Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
PT Semen Indonesia (Persero) Tbk	14,749	0.23%	-8.50%
China Longyuan Power Group Corporati	3,147	0.93%	-6.75%
Airtac International Group	13,683	0.18%	-6.22%
China National Building Material Compar	15,076	0.12%	-4.65%
Public Joint Stock Company Gazprom	2,988	0.56%	-3.83%

Name	Weight (%)	Weighted FF Revenue (%)
Parex Resources Inc.	0.14%	0.15%
PAO NOVATEK	0.13%	0.13%
PJSC LUKOIL	0.32%	0.11%
China Longyuan Power Group	0.93%	0.11%
Public Joint Stock Company G	0.56%	0.09%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	49%	27%
Partial Disclosure	41%	45%
Modelled	10%	29%

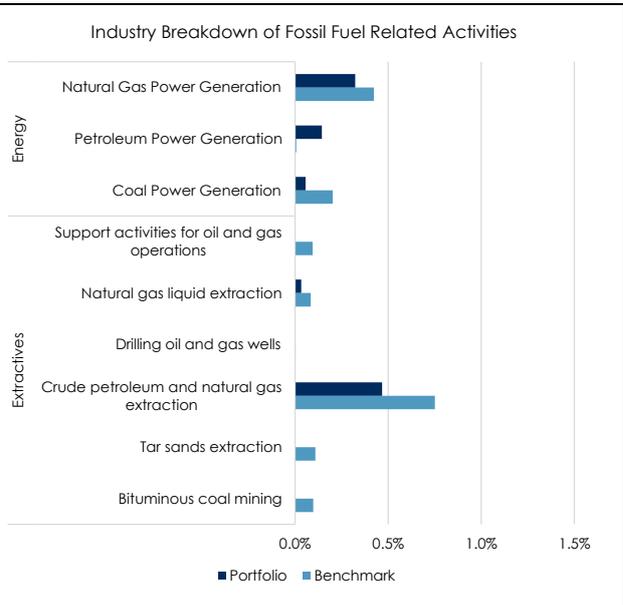
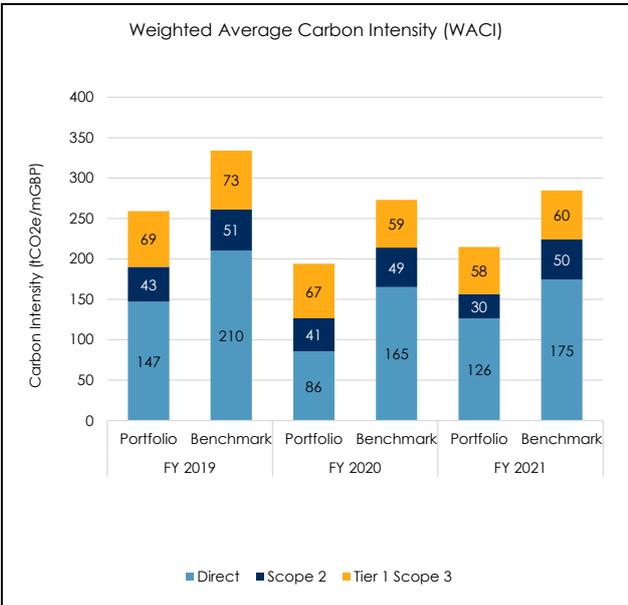
Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	0.43	0.68	0.07	0.65
Oil	0.31	0.59	0.23	0.54
Gas	0.07	0.73	0.61	0.87
Oil and/or Gas	0.13	0.11	0.00	0.11

Full Disclosure - Data disclosed by a company in an un-edited form.
Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.
 The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Active Low Volatility vs. MSCI ACWI

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

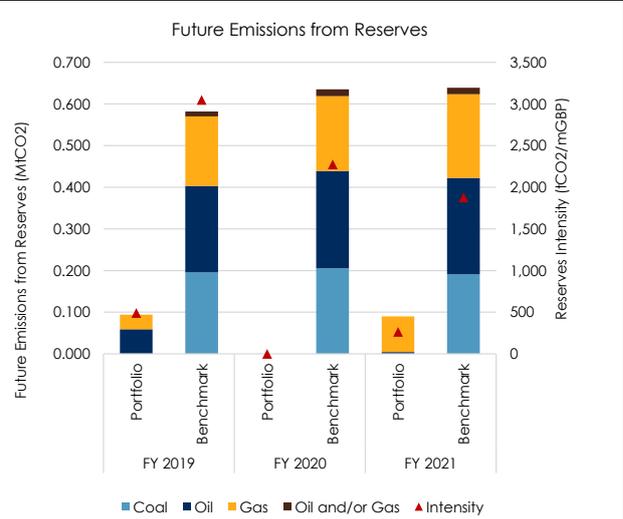
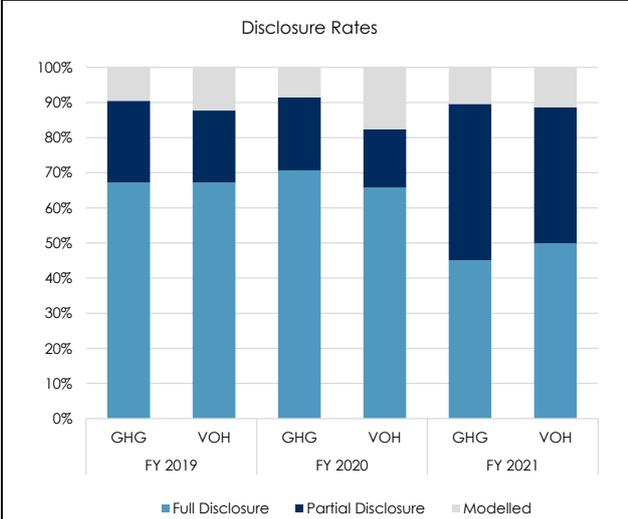
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Waste Management, Inc.	2,891	0.74%	-9.24%
National Fuel Gas Company	1,870	0.85%	-6.59%
Dominion Energy, Inc.	3,521	0.40%	-6.14%
Canadian Utilities Limited	3,888	0.28%	-4.74%
Algonquin Power & Utilities Corp.	2,037	0.51%	-4.33%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
National Fuel Gas Company	0.85%	0.34%
AltaGas Ltd.	0.58%	0.31%
Dominion Energy, Inc.	0.40%	0.15%
Hawaiian Electric Industries, Inc	0.35%	0.14%
Public Service Enterprise Group	0.16%	0.02%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	45%	50%
Partial Disclosure	45%	39%
Modelled	10%	11%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	0.00	0.21	0.00	0.19
Oil	0.00	0.23	0.00	0.23
Gas	0.00	0.18	0.09	0.20
Oil and/or Gas	0.00	0.02	0.00	0.02

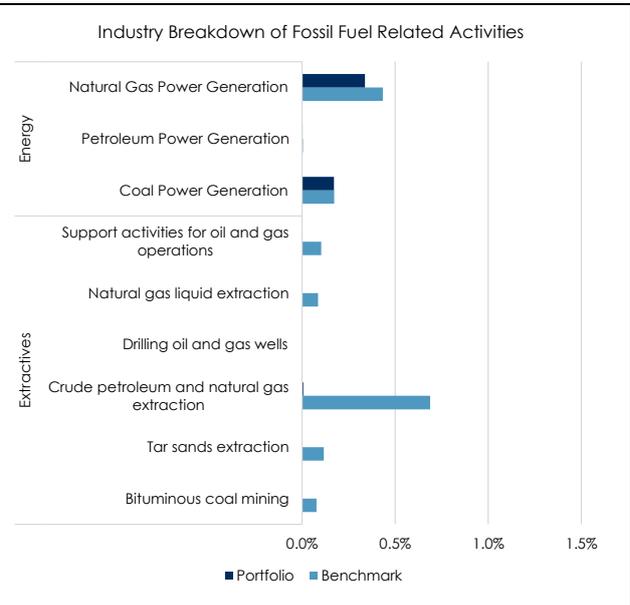
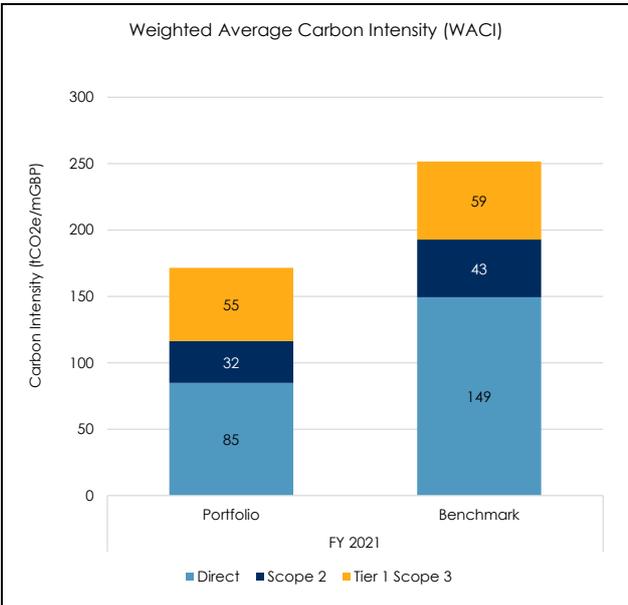
Full Disclosure - Data disclosed by a company in an un-edited form.
Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Paris Aligned World Developed Equity Index vs. FTSE World Developed

2021 Q4



Current Year Top Contributors to WACI

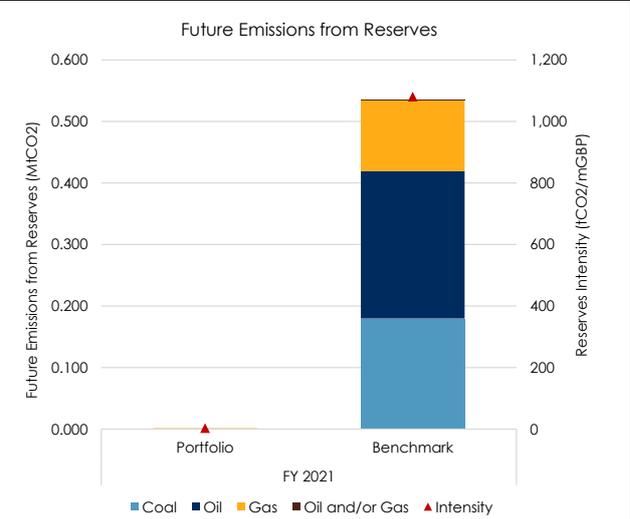
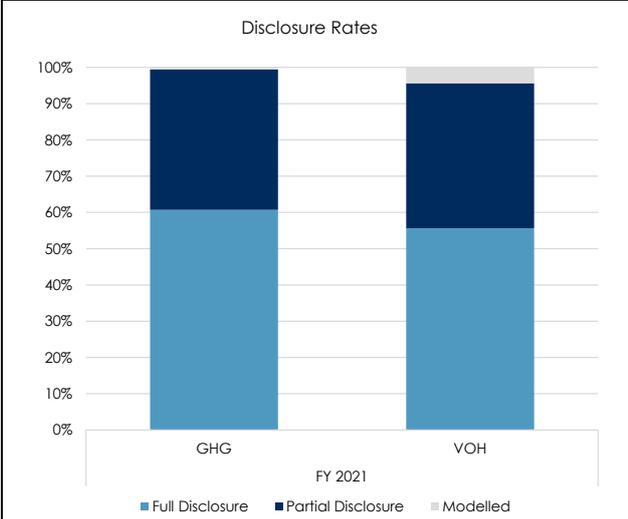
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Duke Energy Corporation	4,653	0.31%	-8.09%
Xcel Energy Inc.	5,297	0.20%	-5.89%
American Electric Power Company, Inc.	4,730	0.15%	-3.92%
Nestle SA	590	1.28%	-3.16%
Ameren Corporation	6,857	0.07%	-2.82%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Duke Energy Corporation	0.31%	0.15%
Xcel Energy Inc.	0.20%	0.08%
Sempra	0.41%	0.05%
American Electric Power Company	0.15%	0.04%
ENGIE SA	0.42%	0.03%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	61%	56%
Partial Disclosure	39%	40%
Modelled	1%	4%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	NA	NA	0.00	0.18
Oil	NA	NA	0.00	0.24
Gas	NA	NA	0.00	0.12
Oil and/or Gas	NA	NA	0.00	0.00

Full Disclosure - Data disclosed by a company in an un-edited form.

Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.

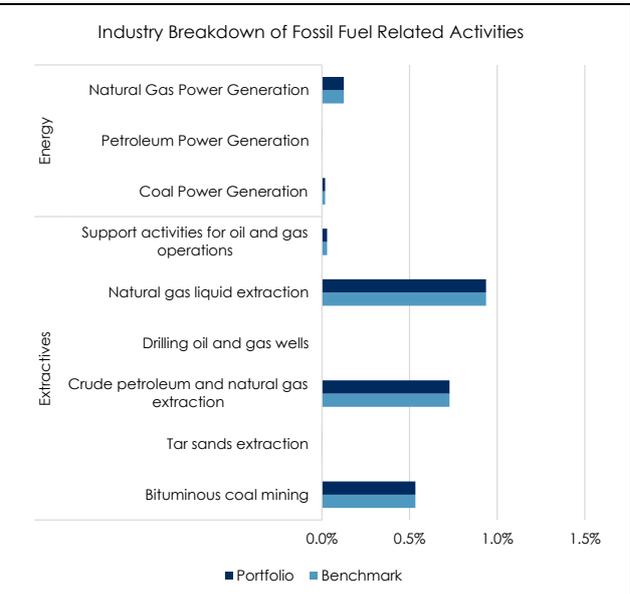
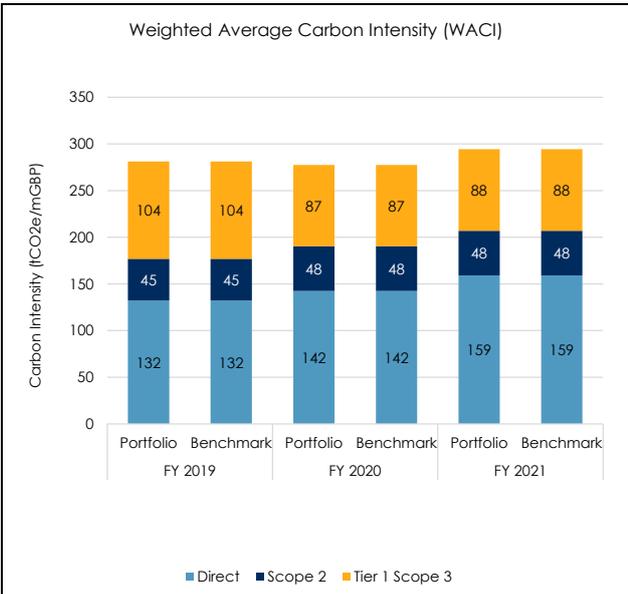
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Passive UK

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

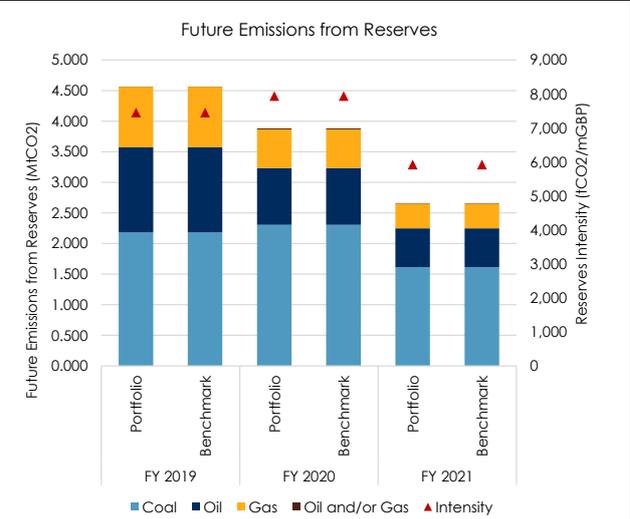
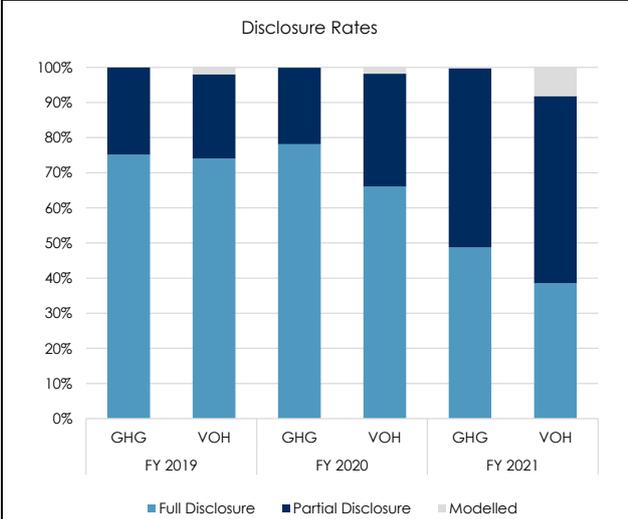
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Royal Dutch Shell PLC	911	5.03%	-1.09%
CRH Plc	2,088	1.22%	-7.52%
Rio Tinto Group	1,006	2.14%	-5.28%
BP p.l.c.	746	2.58%	-4.05%
Mondi PLC	3,396	0.36%	-3.77%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Royal Dutch Shell PLC	5.03%	1.19%
BHP Group	1.84%	0.47%
BP p.l.c.	2.58%	0.25%
Anglo American Plc	1.48%	0.19%
SSE plc	0.70%	0.11%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	49%	39%
Partial Disclosure	51%	53%
Modelled	0%	8%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	2.31	2.31	1.61	1.61
Oil	0.93	0.93	0.63	0.63
Gas	0.63	0.63	0.41	0.41
Oil and/or Gas	0.02	0.02	0.00	0.00

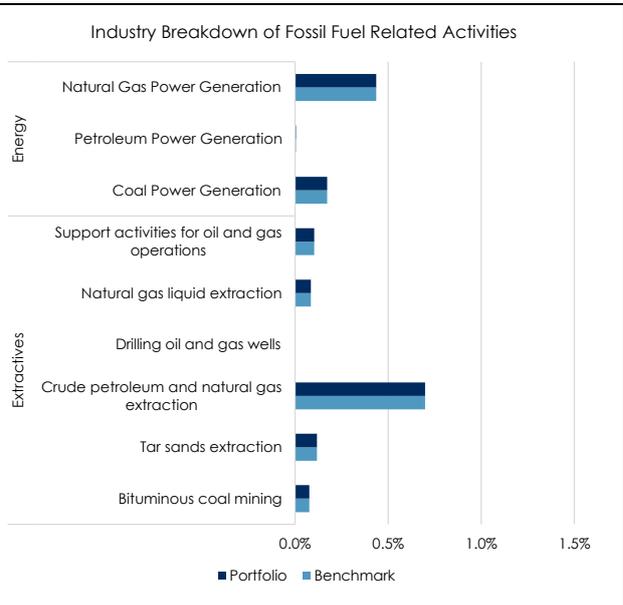
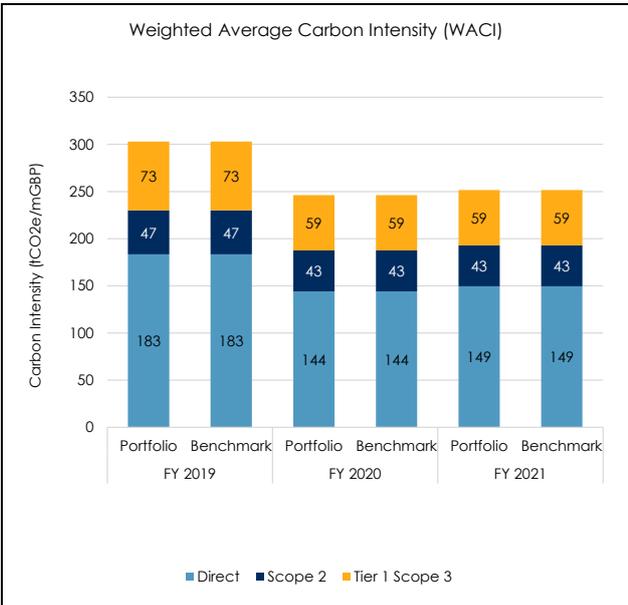
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Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Passive World Developed

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

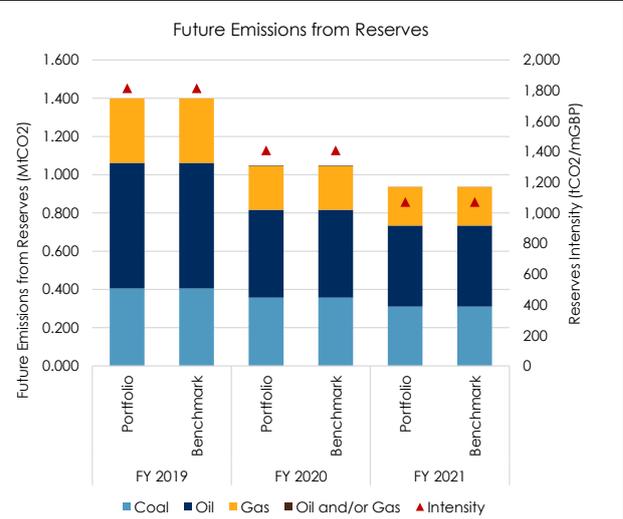
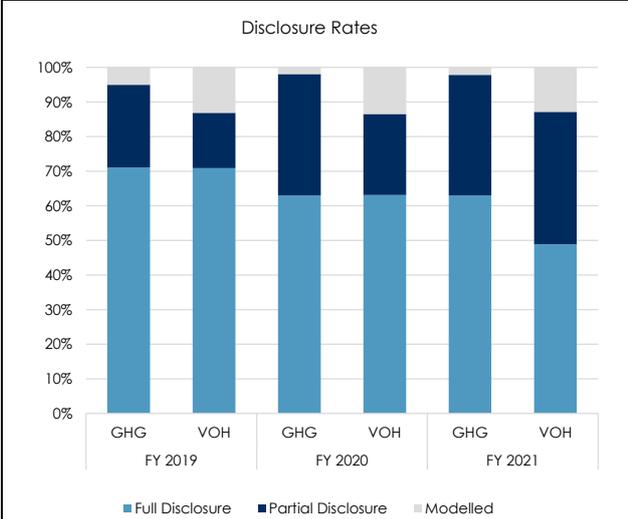
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
NextEra Energy, Inc.	3,753	0.29%	-4.03%
The Southern Company	5,264	0.11%	-2.28%
Duke Energy Corporation	4,653	0.13%	-2.23%
Linde plc	1,977	0.28%	-1.94%
Exxon Mobil Corporation	1,245	0.41%	-1.62%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
ConocoPhillips	0.15%	0.15%
NextEra Energy, Inc.	0.29%	0.14%
Chevron Corporation	0.36%	0.10%
EOG Resources, Inc.	0.08%	0.08%
Canadian Natural Resources Li	0.08%	0.08%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	63%	49%
Partial Disclosure	35%	38%
Modelled	2%	13%

Full Disclosure - Data disclosed by a company in an un-edited form.
Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Future Emissions from Reserves by Type (MtCO₂)

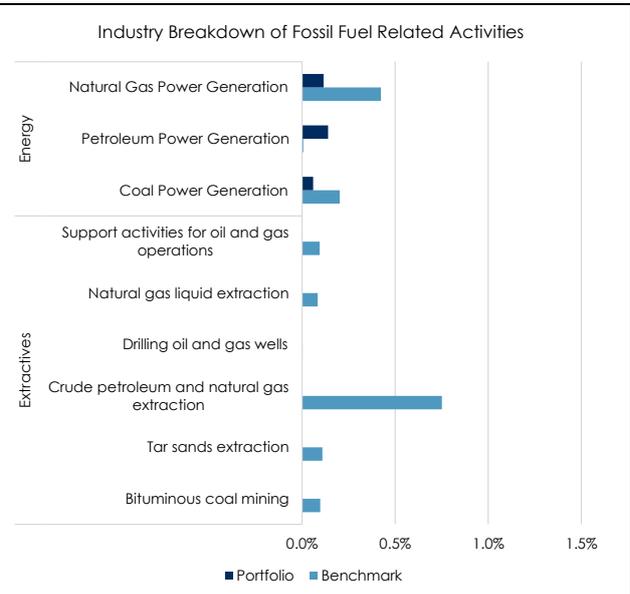
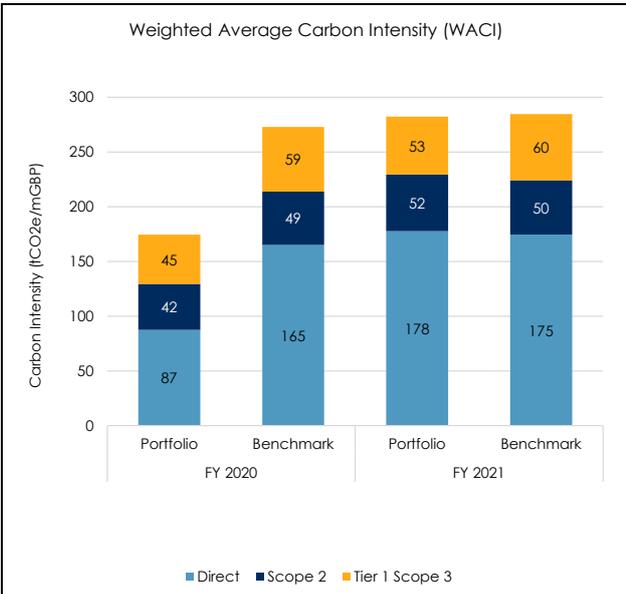
Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	0.36	0.36	0.31	0.31
Oil	0.46	0.46	0.42	0.42
Gas	0.23	0.23	0.20	0.20
Oil and/or Gas	0.00	0.00	0.00	0.00

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Global Sustainable Portfolio vs. MSCI ACWI

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

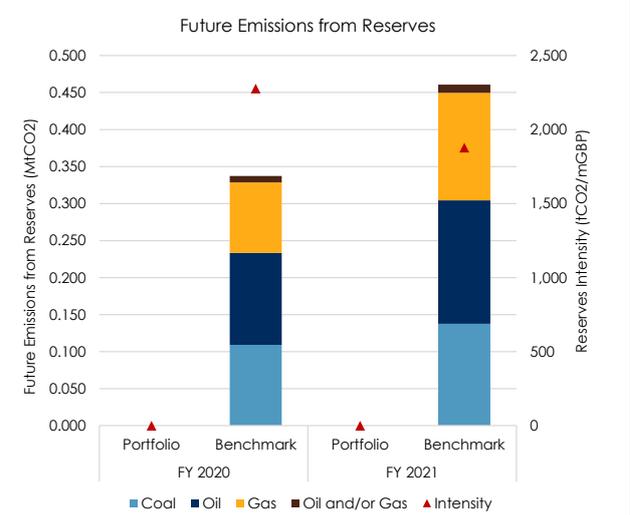
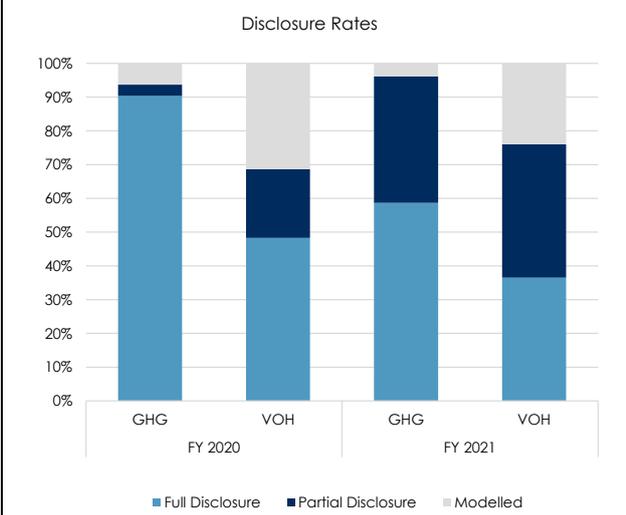
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Republic Services, Inc.	2,855	1.27%	-11.73%
Waste Management, Inc.	2,891	1.06%	-9.85%
Linde plc	1,977	1.12%	-6.82%
Fortis Inc.	2,725	0.64%	-5.55%
L'Air Liquide S.A.	1,719	0.94%	-4.84%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
Fortis Inc.	0.64%	0.14%
Hawaiian Electric Industries, Inc	0.32%	0.14%
Orsted	0.72%	0.03%
L'Air Liquide S.A.	0.94%	0.02%
National Grid PLC	0.70%	0.01%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	59%	37%
Partial Disclosure	38%	40%
Modelled	4%	24%

Full Disclosure - Data disclosed by a company in an un-edited form.
Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Future Emissions from Reserves by Type (MtCO₂)

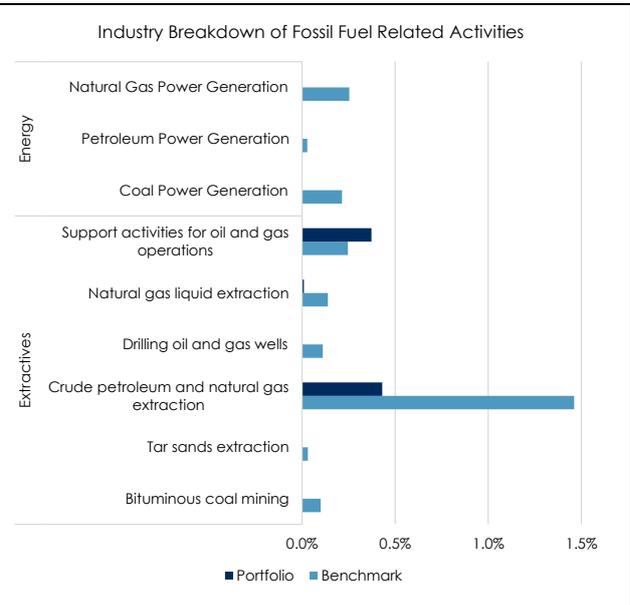
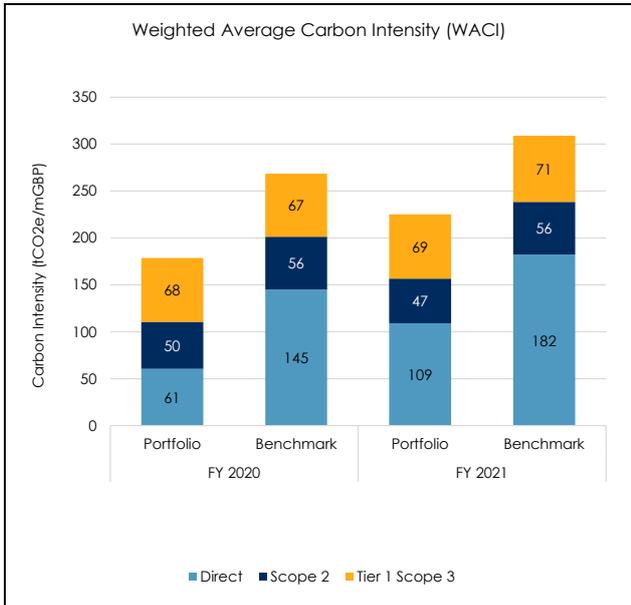
Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	0.00	0.11	0.00	0.14
Oil	0.00	0.12	0.00	0.17
Gas	0.00	0.10	0.00	0.15
Oil and/or Gas	0.00	0.01	0.00	0.01

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.

The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Smaller Companies vs. MSCI World Small Cap

Holdings as at 31st December 2021

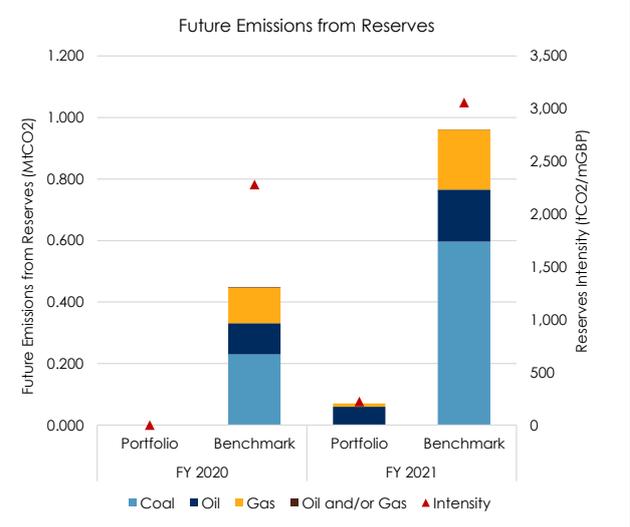
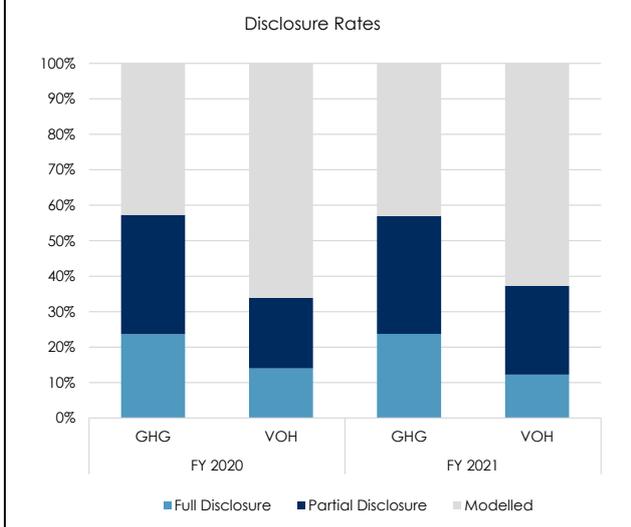


Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
Airtac International Group	13,683	0.25%	-15.14%
Eagle Materials Inc.	4,542	0.39%	-7.50%
Befesa S.A.	1,431	0.98%	-5.28%
Summit Materials, Inc.	1,833	0.53%	-3.84%
Whitecap Resources Inc.	2,068	0.44%	-3.62%

Name	Weight (%)	Weighted FF Revenue (%)
Whitecap Resources Inc.	0.44%	0.46%
TGS ASA	0.36%	0.37%
Clean Harbors, Inc.	0.41%	0.01%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	24%	12%
Partial Disclosure	33%	25%
Modelled	43%	63%

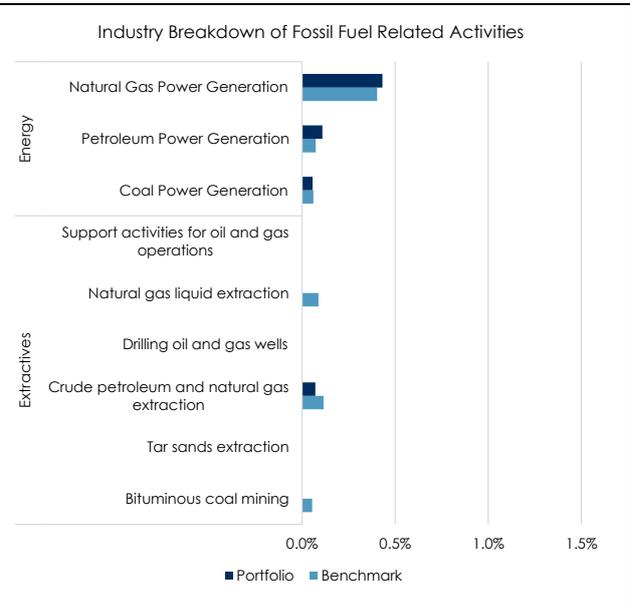
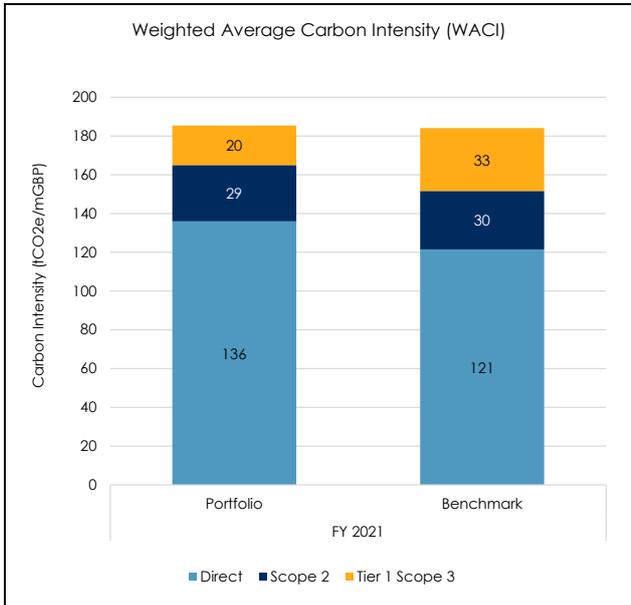
Source	FY 2020		FY 2021	
	Port.	Ben.	Port.	Ben.
Coal	0.00	0.23	0.00	0.60
Oil	0.00	0.10	0.06	0.17
Gas	0.00	0.12	0.01	0.19
Oil and/or Gas	0.00	0.00	0.00	0.00

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Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
Modelled - In the absence of usable disclosures, the data has been modelled using Trucost's EE-IO model.

Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.
 The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

Brunel Sterling Corporate Bond Fund vs. iboxx £ Non-Gilts

Holdings as at 31st December 2021



Current Year Top Contributors to WACI

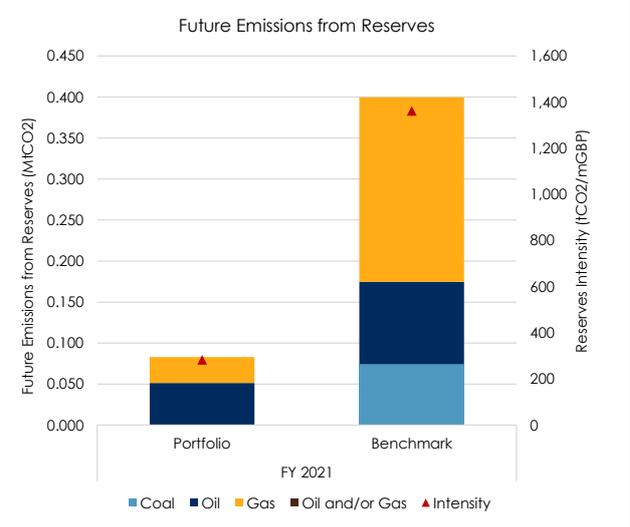
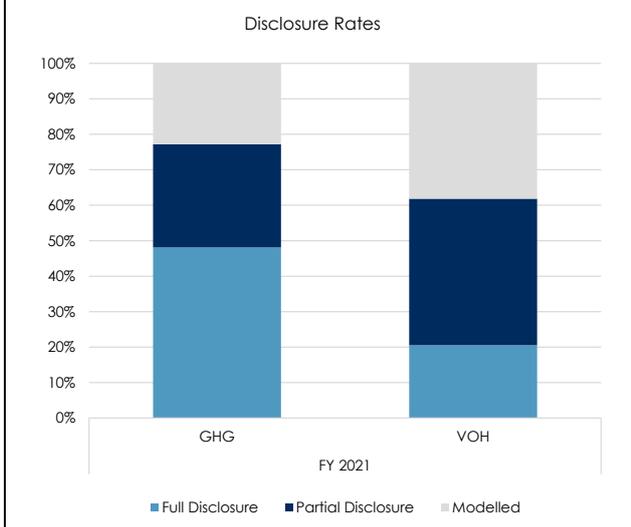
Name	Carbon-to-Revenue intensity (tCO ₂ e/mGBP)	Weight (%)	Contr. (%)
South Eastern Power Networks plc	7,625	0.59%	-23.80%
YTL Power International Berhad	5,868	0.32%	-9.84%
SSE plc	1,363	1.26%	-8.10%
Pennon Group Plc	6,407	0.15%	-4.94%
Electricite de France	614	2.06%	-4.87%

Top Contributors to Weighted Fossil Fuel Revenues

Name	Weight (%)	Weighted FF Revenue (%)
SSE plc	1.26%	0.24%
YTL Power International Berhad	0.32%	0.22%
Electricite de France	2.06%	0.17%
Centrica plc	0.54%	0.05%
BP p.l.c.	0.46%	0.05%

The **WACI** shows the portfolio exposure to carbon intensive companies. This metric takes the carbon intensity (total carbon emissions divided by total revenue) of each investee and multiplies it by its weight in the portfolio.

The **Industry Breakdown of Fossil Fuel Related Activities** chart above breaks down the 'extractives' and 'energy' revenue exposure into specific industry exposures.



Portfolio Disclosure Rates by Method

Carbon disclosure category	GHG-weighted disclosure	Value-weighted disclosure
Full Disclosure	48%	21%
Partial Disclosure	29%	41%
Modelled	23%	38%

Future Emissions from Reserves by Type (MtCO₂)

Source	FY 2020 Port.	FY 2020 Ben.	FY 2021 Port.	FY 2021 Ben.
Coal	NA	NA	0.00	0.07
Oil	NA	NA	0.05	0.10
Gas	NA	NA	0.03	0.23
Oil and/or Gas	NA	NA	0.00	0.00

Full Disclosure - Data disclosed by a company in an un-edited form.
Partial Disclosure - Trucost has used data disclosed by a company but has made adjustments to match the reporting scope required by its research process. Values may also be derived from a previous year's disclosed data using changes in business activities and consolidated revenues.
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Companies may disclose both 1P and 2P reserves (1P refers to those held with 90% confidence, 2P are those held with 50% confidence). Both 1P and 2P are used when assigning embedded emissions to a company.
 The chart above shows the total tonnes of apportioned CO₂ from reserves, broken down by reserve type. It also shows the reserves 'intensity' by normalizing the apportioned embedded emissions by the VOH.

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