



The pathway to net zero for our investment portfolio

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The pathway to net zero for our investment portfolio

In summary:

- Wellcome has adopted a target to reach net zero emissions for our Investment portfolio by 2050 at the latest and set out a pathway to meet this target
- Our target will apply to the scope 1 and 2 emissions of our directly and indirectly-held assets. For the latter, this will apply on a look-through basis to portfolio companies that are held by third party managers. Where appropriate, we will consider scope 3 emissions for certain assets where we might have some influence over these, but these will not contribute towards our overall target
- We will use a staggered approach to measuring the portfolio's carbon footprint, such that a baseline is set only after emissions can be reliably determined for a majority of our assets
- We will start reporting the percentage of the portfolio (by value) with a net zero target and the percentage of the portfolio (by value) with a science-based target
- We will encourage our underlying assets and managers to follow TCFD recommendations – the global standard for climate-related disclosure
- We will use engagement as a key tool to push emissions reduction up the agenda of companies (see our engagement ladder), with each asset class following the recommendations noted in section four.

One: Our strategy

Background: The climate imperative

The global economy is expected to decarbonise over the next few decades as governments, businesses and society seek to mitigate the worst impacts of climate change. Major economies are committed through the Paris Agreement, and increasingly through domestic legislation, to reduce their emissions by a level required to keep the increase in global temperatures from pre-industrial levels to well below 2°C. Decarbonisation is to be achieved by transitioning energy generation from fossil fuels to renewables, improving energy efficiency, and creating carbon sinks, for which very significant investment over the next several decades is required. There will be risks and opportunities for all businesses to varying degrees during this transition, or in a failed transition scenario.

Against this backdrop, governments, corporates and investors alike are setting targets dates by which “net zero emissions” will be achieved. For Wellcome Investments, our aim in setting a net zero target for our portfolio is as follows:

- To allow climate risk (and opportunity) to be explicitly analysed as part of our investment decision-making process in order to protect and maximise risk-adjusted returns over the long-term
- To contribute to effective and responsible stewardship of our assets as a long-term investor.

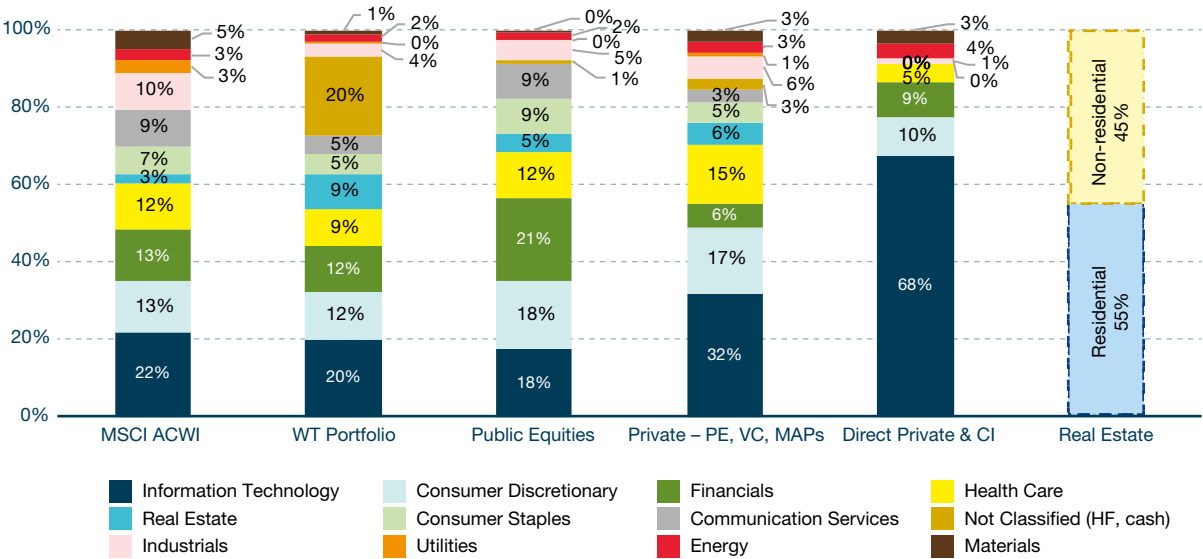
Climate risk is already part of our investment management approach as a component of the licence to operate analysis that we undertake at each stage of our investment process – across initial due diligence, ongoing monitoring and continuous engagement. Companies which take their licence to operate responsibilities seriously should generate stronger financial returns over time. Conversely, if a company does not maintain its licence to operate, we believe there is a threat to its long-term sustainability and its long-term return potential. Therefore, **companies and assets that do not adequately consider and look to address the risks associated with climate change do not merit a place in our portfolio over the long run.**

It is important to emphasise that investment decisions will continue to be made to maximise risk-adjusted returns, and the portfolio’s role is to fund rather than directly express Wellcome’s mission. However, given the scale of the risk to both the sustainability of long term financial returns, and the global societal context, it is appropriate that we become more sophisticated in how we integrate an assessment of climate related risks into our decision making process.

Our starting point today...

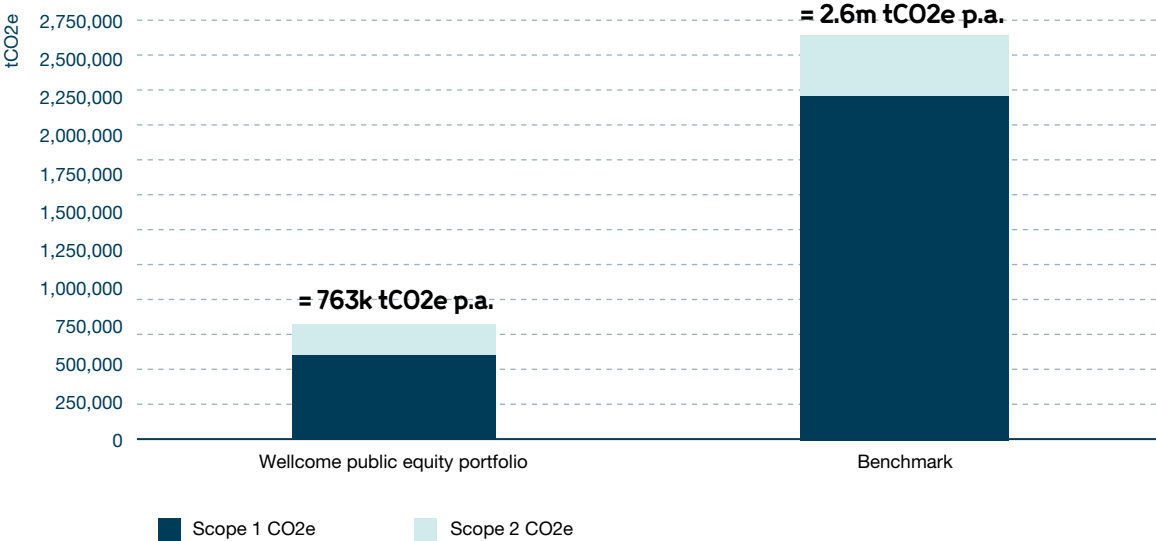
Our £32.6 billion (gross)¹ investment portfolio is well diversified by asset class, geography and sector. However, given the nature of the assets that we invest in – those which we generally expect will generate consistent and sustainable financial returns over a multi-decade horizon – we have less exposure to sectors that tend to be more carbon intensive in comparison to the most relevant global equity index. As the graph below shows, the MSCI AC World has 20% exposure to the highest-carbon emitting sectors (utilities, materials, energy and industrials), whilst **less than 10% of our portfolio is invested in these high-carbon sectors** (excluding any look-through to our hedge fund holdings).

Sector Exposure (as at 31 Dec 2020)



The carbon footprinting work that we did with the analysis firm Trucost on our public equities in Q4 2019 showed that our footprint was **less than 30% of the relevant benchmark's** (see below).

Carbon footprint of our public equities (direct and indirect), as measured by Trucost in Q4 2019²



Making engagement count

We favour engagement rather than divestment, since we are most interested in **driving real world impact in reducing carbon emissions**. However, this approach needs to be justified with clear and targeted engagement goals, with consequences (divestment) if management fail to change course. Whilst we have had some good experiences of bilateral engagement, we hope that our influence will be extended by joining the Institutional Investors Group on Climate Change (IIGCC). We also hope that this will help broaden the focus away from the fossil fuels sector towards the wider ecosystem of carbon financing and consumption.

Successful engagement is key to achieving our net zero ambitions over the next few decades. This applies across all sectors and across all asset classes within our portfolio. Indeed, our efforts are likely to be most focused on our substantial private equity holdings, where we believe we can have the greatest influence and where engagement has been less of a focus thus far. Working with our third party managers and company management teams to push carbon reduction up the agenda will be critical to making progress towards our net zero goal in the next decade and beyond. Elsewhere in our portfolio, real estate brings its own hefty carbon footprint (particularly if any scope 3 emissions are accounted for). Working with contractors and our managing agents and putting the right incentives in place for our tenants will be critical to getting our portfolio to net zero.

Whilst engagement (with clear intentions) is our preferred approach, there is also a place for selective divestment in our toolbox, where companies make no or insufficient progress towards meeting these goals.

Defining a net zero goal

We will have achieved “net zero emissions” from our portfolio when there is no additional carbon being emitted into the atmosphere from its constituent parts; any residual emissions should be matched by removing the same amount of carbon from the air (however, see below on our approach to offsetting). Our formal net zero target is based on the absolute carbon emissions of our holdings, managed internally or externally by partners. Most net zero targets focus on scope 1 and 2 emissions, specifically, the emissions from sources owned and operated (scope 1) or controlled (scope 2 – power). Our target will apply to the **scope 1 and 2 emissions of our directly and indirectly-held assets**; this applies on a look-through basis to portfolio companies and investments that might be held by third party managers³. We will also monitor the carbon footprint of the suppliers, customers and other stakeholders of our holdings (scope 3). In certain situations, particularly where scope 3 emissions are very large, we will ensure that steps are taken to reduce these where the emissions are reasonably within a company’s influence, although we will stop short of including these emissions in the net zero target at this stage.

The table below shows the scopes included within our net zero target:

Suggested scopes to be included within net zero definition

Asset Class	% GAV as of 31/12/2020	Scope 1 & 2	Scope 3	Notes
Public Equities – Direct	34%	Y	~	We will monitor scope 3 emissions of the large emitters
Public Equities – Indirect	12%	Y	Y	Scope 3 relates to emissions of the underlying holdings, while scopes 1 & 2 are manager emissions
Private Equity – Venture	12%	Y	Y	Scope 3 relates to emissions of the underlying holdings and GP travel costs (e.g. for due diligence etc.)
Private Equity – Buyout (inc. MAPs)	10%	Y	Y	Scope 3 relates to emissions of the underlying holdings and GP travel costs (e.g. for due diligence etc.)
Direct Private & Co-investments	7%	Y	N	
Operating companies	3%	Y	~	Varied – see the section on operating companies below
Property – Residential	3%	Y	~	See the section “Approach for direct property” for included emissions
Hedge funds	10%	Y	N	
Cash	9%	NM	NM	

■ Scopes that we will include in our net zero target

■ Scopes that we will focus on where we have the potential to influence, but not within formal target

■ Scopes outside of focus

□ WT focus areas where emissions are likely to be high

Best practice thinking on the definition of asset owners' net zero targets is constantly evolving. Over time, more responsibility may need to be taken for scope 3 emissions, as standards around measuring and influencing these develop. We will watch these developments closely and be ready to adapt the definition of our net zero target as appropriate.

The quality of the net zero target is also critical; we have adopted science-based targets (Paris-aligned) as our key standard.

Where at all possible, we believe that our net zero target should not allow for the use of offsets due to questions around the real-world efficacy of these. However, it may be that certain assets and companies do require the use of offsets to achieve their targets. Where this is the case, we will highlight that offsets are being used to achieve their net zero target and will interrogate the quality and efficacy of these offsets, where data is available. Generally, it is important that offsets adhere to the key principles of additionality, permanence and verifiability. We do not currently plan to use offsets at the portfolio level to achieve our net zero target. However, some of our companies may end up being carbon negative (e.g. Microsoft is targeting this), and if achieved, this position could be used to offset some of our positive carbon footprint elsewhere in the portfolio.

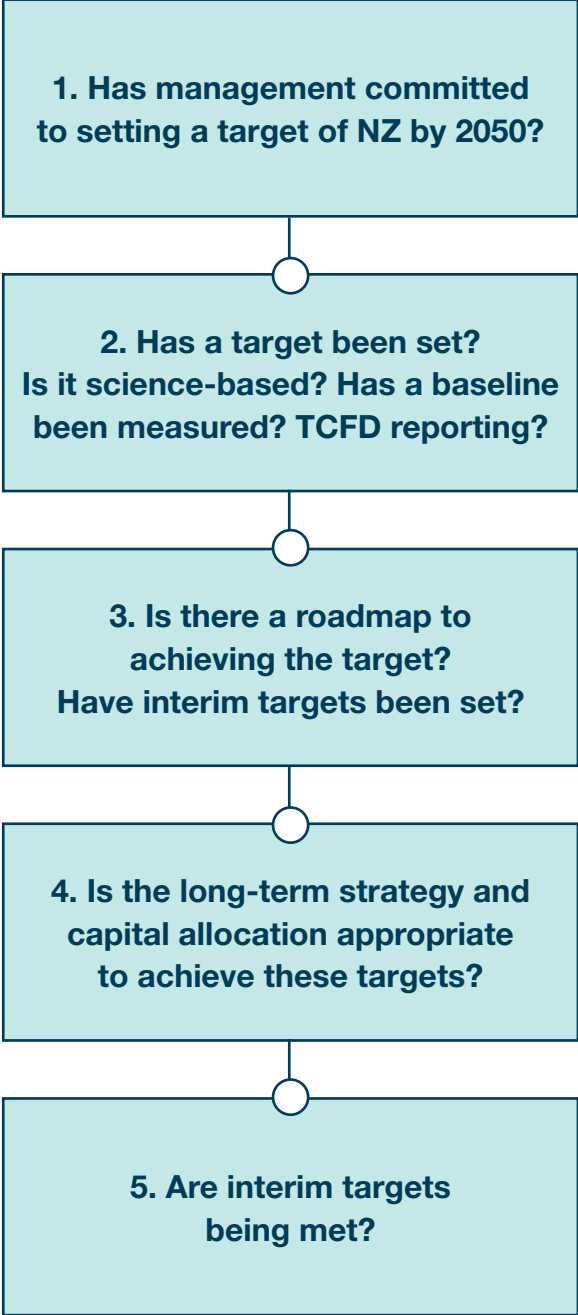
Our net zero strategy

We are applying a **bottom up strategy to shift our portfolio over time, by looking to drive each individual asset in our portfolio to net zero.**

We will share and apply best practice within each asset class, learning from our best performers and our peers. Already, we can see the potential of this bottom up strategy when we consider that **45% of our total equity value is already targeting net zero by 2050⁵** as at 31 December 2020. Given our basic commitment, we will be stringent on the quality of the target (i.e. we expect it to be science based) and hold management to account in setting and delivering on a strategy to achieve it. Currently 29% of our total equity value has a science-based target⁶, which means they have emission reduction targets that are Paris Agreement-aligned.

Put simplistically, our net zero strategy involves taking each asset in our portfolio through the following stages:

Key stages of net zero targeting and monitoring – our engagement ladder



When applying the above to our investment portfolio, we are currently working on stage 2. However, as an example of how each step in this path will not necessarily be taken sequentially, we are setting out a roadmap for achieving the target before measuring a full baseline.

Establishing a baseline in measuring carbon emissions is important in allowing us to track progress, and to identify and focus on hotspots. However, we will not immediately go out and take a full baseline, since data is not readily available in certain assets within our portfolio (most of the unlisted portion) and there is not yet a consistent standard for measuring, assessing and analysing carbon emissions. For this reason, we have adopted a staggered approach to **measuring our carbon footprint**:

- 1) Our **public equities (direct and indirect)** can be measured relatively easily, albeit with some use of estimates. We will use an external provider (Trucost or a similar provider) to do this **every year**, beginning in Q4 2021.
- 2) The carbon contribution of our **property assets** will likely exceed their weighting in our portfolio, and there is much work to be done here. The sector is also moving relatively quickly to develop common measurement standards. For these reasons, we are identifying and appointing appropriate external consultants to advise on measuring and managing our footprint in **2021**. Most of our **operating companies** will also fall into this category.
- 3) Measuring the footprint of our **private equity assets (including co-investments)** is likely to be less valuable at this stage since the data is less widely available. In consequence we will not do this immediately but expect it will be more meaningful in the next few years as data is more available and standardised. However, we will immediately engage with our managers to make clear the direction they need to move in.
- 4) The return-on-effort payoff for measuring the emissions of our **hedge funds** is also low at this stage, particularly given there is no consensus on how to measure the footprint of short and derivative positions, as well as a relative lack of transparency on underlying holdings. We will revisit detailed measurement in this asset class sector in a few years. As with private equity, this will not stop us continuing to engage with our hedge fund managers.

There is a move across different industries and asset classes to converge on a common set of disclosure standards, most likely those supported by the Task Force on Climate-related Financial Disclosures (TCFD) recommendations. We support these efforts and **will encourage our underlying assets and managers to follow these TCFD recommendations**, where possible and appropriate for the respective asset classes.

As a basic metric, we will report the **percentage of the portfolio with a net zero target. This number currently stands at ~21% of the total portfolio gross assets** with a net zero target of 2050 or before. We will report this number on an annual basis to monitor our progress whilst we are waiting for more accurate carbon emissions data across the whole portfolio. We will also report the percentage of the portfolio with a science-based target (currently 13% of total gross assets⁷), although it is unclear whether this definition will be adopted by unlisted assets (this is something that we will push for in engagement). Crucially, we will also track how companies are progressing in the achievement of their own target over time, as well as how this is reflected in strategy and capital allocation decisions.

We will also adopt a **qualitative approach** to assess the alignment of our portfolio holdings and partners with a decarbonising economy.

What is our time horizon for net zero?

A key question is the date we have targeted for reaching net zero emissions. The decision has been a balance between setting a goal that is suitably ambitious, to reflect Wellcome's position, but also realistic and achievable based on the available information. It is also important to note, as above, that we start from the relatively strong position of having a portfolio that contains fewer of the most carbon-intensive assets than most peers and applicable benchmarks.

Given the uncertainty over the rate at which decarbonisation will be possible, particularly in the unlisted parts of investor portfolios, it is challenging to say **conclusively that net zero by 2040 or even 2050 will be possible without use of offsets**, even if radical action is taken. There may also be a trade-off for us to make between the year that we aim to achieve net zero, and the comprehensiveness of our net zero definition and what scopes of our underlying investments we choose to take responsibility for.

Despite the uncertainties we have decided to target net zero carbon emissions for our investment portfolio by 2050 at the latest. However, as we get more information on the feasibility of net zero at an asset-class level over the next decade, we can consider whether to bring this date forward, or whether doing so would have a more detrimental impact on forward-looking returns. Where possible, rather than encouraging focus on a specific date, we should instead focus on getting assets on a trajectory that is aligned with the level of decarbonisation required to keep global temperature increase to less than two degrees centigrade (compared to pre-industrial levels).

An indicative snapshot of the nature of emissions within our portfolio by asset class

Asset Class	% GAV as of 31/12/2020	Likely emissions (per £ invested)	Ease of emission measurement?	WT ability to influence carbon targets?	Degree of awareness within asset class?
Public Equities – Direct	34%	High	High	High	High
Public Equities – Indirect	12%	High	High	High	High
Private Equity – Venture	12%	Low	Low	Low	Low
Private Equity – Buyout (inc. MAPs)	10%	Medium	Low	Medium	Medium
Direct Private & Co-investments	7%	Low	Low	Low	Low
Operating companies	3%	Medium	Low	High	Medium
Property – Residential	3%	High	Medium	Medium	High
Hedge funds	10%	Medium	Low	Low	Low

Note: Illustrative only

We will also set **interim targets** that will help us track our progress. The IIGCC is currently considering appropriate interim targets as part of their net zero investment framework so we will wait to take this guidance into account, but we suggest that these might cover the following metrics:

- Percentage of the portfolio with a net zero target should reach 100% by 2040 (according to SBTi guidelines). We suggest setting a linear target between our starting point today and 2040, whilst recognising that progress is very unlikely to be linear
- Percentage of the portfolio that discloses its greenhouse emissions
- Qualitative metric: percentage of the portfolio at each stage of the engagement ladder – to be refined. In the near term, whilst we refine the steps on the engagement ladder, we will report the climate score of our most significant assets (graded as 1, 2 or 3 as described in the qualitative metrics in section 2).

Two: Measurement and reporting

Background

Measuring the carbon emissions of our portfolio assets is essential to help us to understand our climate risk exposure, identify candidates for engagement, and to further dialogue around climate-related financial disclosure. Tracking this over time will show us how successfully our companies/assets are achieving their interim targets on the path towards net zero and will ultimately tell us when we have reached this goal at the portfolio level. However, there is a balance to be struck between the benefits of obtaining a whole portfolio baseline, and the feasibility and credibility of doing so when disclosure standards and methodologies for measurement are not yet established.

Progress has been made in recent years in getting large corporates (mainly listed companies) to measure and report their carbon emissions and reduction commitments amongst other items as a part of wider Environment, Social and Governance (ESG) reporting areas. However, there is still much further to go on the disclosure side, and a growing need to ensure consistency of reporting standards. Most privately held companies, and still many public companies, choose not to report any of this data because there is not a clear framework to measure and report data (this is the case for many sectors and asset classes). This trend is slowly reversing as climate advocacy groups (such as the IIGCC, Net Zero Asset Owners Alliance etc.) are supporting the development of measurement and reporting frameworks. The investment community behind these groups is proactively engaging with corporates to disclose footprint data and emissions targets, with some asset managers going so far as warning they will steer capital elsewhere if certain disclosure or progress is not shown. For these reasons, we expect climate-related disclosure to improve significantly across sectors and asset classes over time. Furthermore, some governments intend to make climate-related disclosure mandatory for all corporates in their jurisdiction.

We believe there is an important role for both quantitative and qualitative measurement in tracking our portfolio's progress towards net zero.

Quantitative metrics

The TCFD has set the industry practice on quantifiable emissions disclosure and recommends various metrics to measure carbon footprints. While it is important to recognise that each metric has its own limitations, we believe the following metrics are appropriate for us to use as they are simple, intuitive and enable us to compare portfolio emissions over time:

- **Absolute carbon emissions (tons CO₂e)** – the sum of the equity ownership of each portfolio company's greenhouse gas (GHG) emissions. This is a simple and intuitive metric that can be used to identify the largest absolute GHG contributors to the portfolio and can be tracked over time to identify changes in company emissions. However, this data is not reported on a per unit (financial or otherwise) basis, and therefore cannot be used to compare portfolios of different sizes. **This is the metric we will use to measure a company, and our portfolio's, net zero footprint.** It is worth noting that all else being equal, absolute carbon emissions will trend upwards over time as companies grow (unless the marginal unit of growth is carbon neutral) creating a headwind we will need to work against.
- **Carbon-to-Value or C/V (tons CO₂e/ \$m invested)** – the total carbon emissions for a portfolio/company normalized by the market value of the portfolio/company. This metric can be used to compare portfolios of different sizes over time or against a benchmark as it normalises emissions using market value. However, large changes in market value can be misinterpreted.
- **Carbon-to-Revenue or C/R (tons CO₂e/ \$m revenue)** – the total carbon emissions for a portfolio/company normalized by total sales of the portfolio/company. This metric expresses the carbon efficiency of the portfolio per unit of output. It normalises emissions by revenue, therefore making it easy to track carbon efficiency over time and compare against other portfolios and benchmarks.

- **Weighted Average Carbon Intensity or WACI (tons CO₂e/ \$m revenue)** – the portfolio’s exposure to carbon-intensive companies by taking the GHG emissions based on portfolio weights rather than equity ownership. This metric can easily be applied across asset classes and sectors but is sensitive to outliers as it uses revenue to normalise the data.

When aggregating portfolio data, Wellcome will use reported scope 1 and 2 emission data from the company or CDP, including estimates for listed companies that do not currently report emissions. A carbon footprint exercise is conducted initially for the listed equity portfolio only, and the analysis and reporting will be done by Trucost or a similar provider, an independent external consultant. This will then be cross-checked internally against emissions reported by companies to CDP or in their annual reports.

Our working assumption is that over time more companies (private and public) will be reporting emission data. This is another reason why reporting on % of assets with a net zero target, in the near term at least, is an appropriate metric that is easy to measure without a full portfolio baseline.

Qualitative metrics

The main form of qualitative measurement is company engagement. Given that many of our portfolio assets do not yet measure emissions, the primary objective will be to engage with them to measure and disclose emissions, and to commit to setting net zero emission targets. A further step will be to encourage companies to establish science-based net zero targets which are approved by the Science-based Targets Initiative (SBTi).

The focus will be on assets with significant NAV in the portfolio and also looking at the likely largest absolute emitters in the portfolio. Each of Wellcome’s asset-class teams have reviewed their assets and suggested further ways to engage with their companies to move towards reaching a net zero target (see section 4).

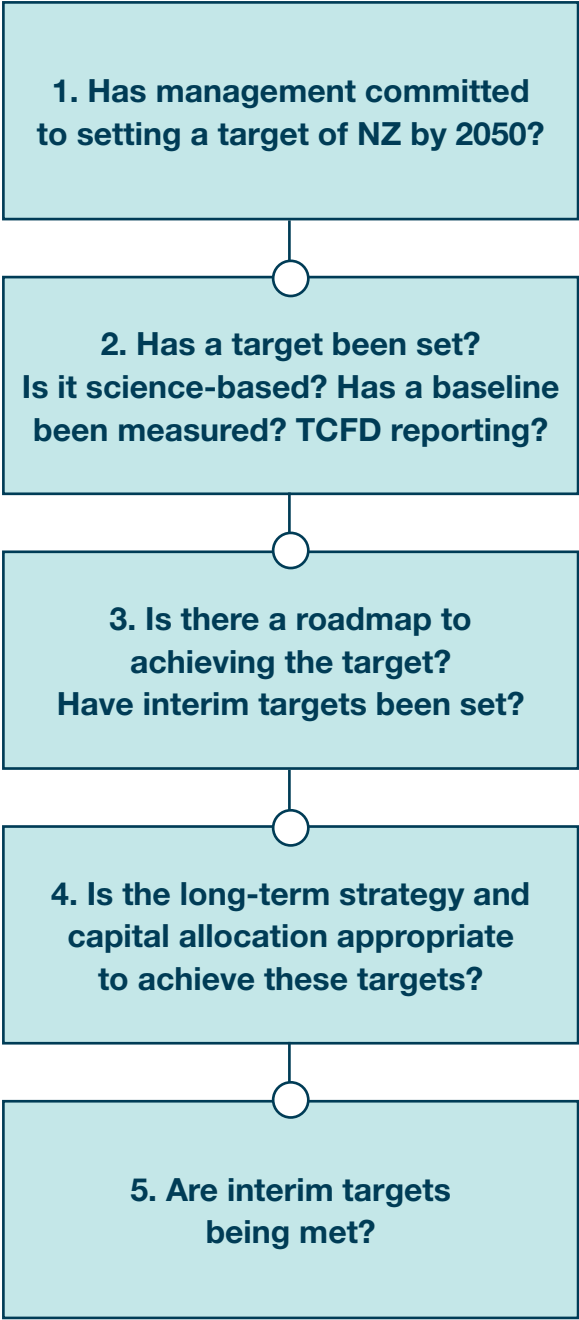
To track progress on company engagement, as well as build up a portfolio view of progress in getting to net zero, we will adapt our regular reporting to the Investment Committee, categorising assets as 3, 2 or 1 depending on their level of engagement and progress:

- 3) Have committed to a science-based net zero target (at the portfolio company level, if indirect) and are tracking progress well against this (recognising that we might not have much evidence of this in the early years, but strategy and capital allocation should reflect these targets). We would also expect managers to have net zero targets covering their scope 1 and 2 (operational) emissions.
- 2) Have emissions reduction targets, but not science-based (i.e. by 2050), or have committed to developing a target.
- 1) Do not measure or are not thinking of climate change as an issue.

This approach can also allow us to track the percentage of GAV that fall into each of these categories outlined in 3–1 above.

As standards evolve and as our investment partners become more sophisticated in their understanding of this topic, we will use the full engagement ladder to drive the dialogue and track progress. Whilst this will not be overly onerous, regular dialogue will focus companies/managers on getting onto the first step of the ladder below, and then moving along it. We will then report progress against this – e.g. we have 10% of our indirect (externally managed) unlisted assets by GAV at step 2 [illustrative example only].

Our engagement ladder



This dialogue will typically be undertaken at the asset class level, as this is where the relationships sit, and where we can therefore have constructive conversations that speak to the practicalities of adopting a net zero target, and how this might impact long term financial returns. However, this topic has featured in a large number of our most senior (CIO/ CEO to C-suite) level conversations, and we expect this to continue, to emphasise its importance to our Investments portfolio and to the wider Wellcome.

Measurement and disclosure summary

Quantitative metrics:

- Use Trucost or a similar provider to track footprint (i.e. absolute carbon scope 1 and 2 emissions) of our public holdings each year, to coincide with financial year-end reporting. Monitor annual changes in absolute emissions and carbon intensity, and comment on the largest contributors to emissions for context
- Use CDP to monitor independently and cross-check (against Trucost or a similar provider) the emissions status of our directly owned public holdings
- Not to construct/estimate a full portfolio baseline (including unlisted) yet, but proactively push for more disclosure and plan for a full portfolio baseline in a couple of years when the carbon measurement methodologies are more standardised
- Disclose and track percentage of portfolio with a net zero target by scoring progress for all of our significant assets (and we will work on understanding the quality of these targets and progress against them)
- Disclose percentage of portfolio for which carbon emissions data is available, and percentage for which it is estimated
- Advocate for reporting in line with TCFD recommendations (measuring as per the GHG Protocol) for all asset classes.

Qualitative metrics:

- For asset classes that currently have no reporting framework (mainly private assets), our main approach will be proactive engagement to get companies to begin measuring and reporting emissions as a starter, with a view to having reduction targets as a next step
- Chart progress against the engagement ladder to keep track of climate related risks and to help us prioritise our engagement efforts.

Three: Integration into investment decision making, process and risk analysis

Integrating climate analysis into our diligence and monitoring

Fundamentally, decarbonising our portfolio goes hand-in-hand with the investment team's mission to maximise sustainable financial returns over the long term and to protect the real value of our endowment. For this reason, it is critical that climate change risks and opportunities are effectively factored into our decision-making process for all assets. Integrating this into our diligence and monitoring process will help drive decarbonisation up the agenda of our partners over time.

Going forward, each investment recommendation will include a section on climate change for every asset, and this line of questioning will form part of our diligence (see the Engagement Ladder). As outlined above quarterly reporting will be adapted to capture climate change risk.

Stress testing and risk analysis

There are other important methods of assessing and seeking to mitigate climate change risk for our investments beyond targeting a net zero portfolio. In Q4 2019 the team completed an assessment of the key risks and opportunities that the assets in our portfolio might be exposed to as a result of two different climate scenarios: a world with less than two degrees warming (i.e. a fast transition scenario) and a world with more than two degrees warming (i.e. high levels of physical risk). We are building on this relatively crude exercise to undertake scenario analysis at regular intervals (every two years). No doubt this will become more sophisticated over time.

In addition, some asset managers have started experimenting with stress testing individual assets and portfolios for specific carbon prices. As the tools to allow for such stress testing become more sophisticated, we will be adopting a similar approach.

As well as forming a bedrock of our measurement approach, TCFD guidelines also cover risk management, strategy and governance. These guidelines on assessing physical and transition risks are being integrated into our diligence and monitoring processes, where relevant, at the individual asset level. This will be complemented with TCFD disclosure at both the portfolio level and the Wellcome level⁸.

Climate solutions investments

Many other asset owners have implemented resolutions to increase their allocations to "climate solutions" investments. They have done this partly in reaction to a growing view from stakeholders that private investors not only have a growing responsibility to fund the energy transition, but also that doing so is not at odds with the requirement to generate long-term financial returns for their fiduciaries⁹.

Given that we do not utilise strategic asset allocation, adopting such a target for climate solutions investments would be at odds with our successful investment philosophy. Looking through our portfolio, our total "climate solutions" investments currently account for roughly 0.6% of total portfolio gross assets. This number is relatively low since to make it into our portfolio assets need to have both appropriate risk-adjusted return expectations, to ensure that we can continue to generate sufficient returns to fund our mission, and to be scalable, to have a sufficient impact on our portfolio. Until recently, there were very few investments that might fall under the "climate solutions" umbrella and also meet these criteria. However, there are promising signs that this is changing, and we are starting to consider several investments with these attractive structural tailwinds that might have appropriate risk-adjusted returns and be scalable.

We will continue to build networks across asset classes in areas connected to the energy transition and the need to decarbonise large segments of the economy. We must maintain our high standards for prospective financial returns and be very cognisant of the need for an investment to have a material impact in the context of our portfolio. Finding investments that can be sufficiently scaled to move the needle within our portfolio, and have the potential to generate adequate profits to justify the time required within our lean team, is a particular challenge in immature sector.

Internal resourcing

As with our work on licence to operate, we believe that these ongoing engagement efforts towards our net zero target are best undertaken by the members of our team who directly cover these assets. It is these individuals who have the closest relationships with our investment partners and management teams, and who would be best placed to influence their thinking.

Integration into investment decision making and risk management

- As detailed in the measurement section, integrate a climate risk column into IC papers to enable easy identification of key priority areas
- Investment recommendations will include a section on climate change risk; diligence will include questions on net zero targeting and how climate risks and opportunities are considered. Specifically, we will consider the impact of a \$100/t carbon price on a company's business model, where relevant
- Scenario analysis for different RCP scenarios, and potentially stress testing for different carbon prices, is likely to be an important risk management tool; we expect to be undertaking this roughly every two years.

Four: Considerations by asset class

As set out above, we are approaching our net zero targeting on a bottom up basis, focusing on each individual asset adopting such a target wherever feasible. As such, we have considered the portfolio on an asset class-by-asset class basis, in order to present a snapshot of the extent to which the current components are considering net zero targeting. The goal here has been to identify best practice and a list of recommendations that we will adopt as a team as part of our net zero roadmap.

A quick note on hold period: we have no finite hold period for our assets, and indeed our time horizon could well span decades rather than years. However, we acknowledge that it is unrealistic that we will hold all of these assets until 2050. Indeed, the majority of our unlisted assets are held in funds with a finite life, where General Partners (GPs) are forced to exit assets within a 10-12 year period. However, we believe that it is still important to engage with our GPs now in the expectation that they will, with time, push their portfolio companies to adopt net zero targets. Not only will this be important to us achieving our interim targets, but most importantly, future owners of these companies are increasingly likely to care about their carbon footprint, and there is good reason to believe that assets that are ahead of the curve in this regard will command a premium price (or indeed, avoid a discounted one).

Public equities

External managers (indirect)

Most of our external long-only managers have an ESG framework integrated into their investment processes, which includes an assessment of environmental factors. Some of our managers have dedicated ESG analysts who contribute to the research process. Others rely more on external service providers than dedicated internal ESG capabilities, but we would expect a continuous increase in the latter over time. Most of our managers are involved in investor networks focused on climate change.

Given the nature of their underlying investments, our managers are expected to be easily able to calculate and track the carbon intensity of their portfolios. Several of our managers have recently started reporting the carbon intensity of their investment portfolio in their quarterly reports. Unsurprisingly given the nature of the sectors and companies in which they invest, these portfolios screen very well against the global equities benchmark. One of our managers has a dedicated ESG research team which produces sophisticated climate change-related risk analyses, focusing in particular on the physical climate risks.

Directly held public equities

Below is a table showing the emissions and reduction targets of our directly held companies by sector, where available. Out of our 38 direct holdings as at 31 December 2020, **20 already had a carbon neutral commitment by 2050 or sooner.**

Wellcome's direct public equities' carbon emissions and reduction targets by sector

Sector	Direct equity (GCB) portfolio weight	Sector emissions, Scope 1 +2	Net Zero target by 2050?	Science-based emission reduction target?	Board-level oversight on climate issues?	Management incentives on climate issues?
Source	Wellcome	CDP	Company reports	SBTi	CDP	CDP
Unit	Sector % of NAV	MtCO2e	% of Sector NAV	% of Sector NAV	% of Sector NAV	% of Sector NAV
Internet	23%	15.6	43%	57%	46%	31%
Financials	20%	2.3	31%	24%	60%	49%
Consumer	18%	23.2	61%	0%	100%	100%
Software & Tech	17%	1.0	67%	100%	90%	100%
Healthcare	8%	3.3	83%	0%	73%	73%
Real Estate	6%	1.0	100%	58%	100%	100%
Industrials	6%	136.0	100%	0%	84%	84%
Payments	2%	0.1	0%	0%	100%	100%
Total	100%	182.5	58%	38%	75%	71%

1. All data is taken directly from the latest CDP database of company reports. Where CDP data is not available, we have used company reports or press releases.
2. The sector emissions reflect the total emissions of the companies, by sector, that we own in our direct equity portfolio. This does not represent the proportional emissions attributed to Wellcome's stake in these companies.

3. Science-based targets are in line with the goals of the Paris Agreement – to limit global warming to below 2°C above pre-industrial levels and aim to limit warming to 1.5°C.

Approach to public equities

Direct holdings

- Ask stock analysts to verify the data on their companies (the data is mostly pulled from CDP) on an annual basis, in order to start monitoring quantitative (in addition to qualitative) progress
- Sector groups should be aware of what their scope 1, 2 and 3 emissions are, and monitor best practice to reduce these within the sector
- Introducing a three-step process for our directly held equities:
 1. Engage with companies to set a net zero by 2050 target
 2. Ensure that targets set are science-based, along with interim targets. The company strategy should reflect the net zero target in their business operations
 3. Monitor progress against these interim targets, and be prepared to escalate engagement efforts (by ourselves or with other partners)

- We recognise that setting a net zero target will be more challenging for some companies/sectors than others. We will use our networks, through our external managers, IIGCC, peers or otherwise, to help with this

Indirect holdings/external managers

- Directly measure and track over time the underlying emissions and net zero commitments of our indirect equity exposure (using the same provider as for direct equities in order to be consistent)
- Encourage our external managers to disclose absolute carbon emissions of their portfolios
- Ask our managers how they are thinking about carbon footprints and carbon neutrality in their portfolios and the broader direction of travel.

Buyout funds

Most firms have started to recognise climate change as a potential headwind or tailwind to certain industries and have started to integrate this into their diligence where relevant. In addition, we have heard from several of our partners that companies that perform well on ESG metrics command a premium upon exit.

However, the private equity sector is generally lagging public markets on topics such as measuring carbon footprints, articulating comprehensive approaches to the problem and setting targets, although exceptions do exist. While the industry may have improved their companies' performance on relevant metrics, we currently have no evidence to support or refute this due to the lack of useful data.

Private equity firms should be able to make meaningful impact in improving portfolio companies' performance on climate change metrics, because the private equity model enables active investment. This ability to enact meaningful change, combined with the fact that private equity is lagging, means that improvements made by the large firms would have significant real-world impact. It is also an asset class where investors should be able to catalyse significant improvements through engagement that is not time intensive.

We have had some constructive discussions with many of our private equity partners (including at the most senior levels). Many of our partners are becoming more sophisticated in integrating climate risks into their diligence. Some have established and hit carbon neutral targets for their scope 1 and 2 emissions, whilst (more impressively), others have released portfolio level targets. We will be engaging in a prioritised fashion with our managers to encourage them to follow a similar path.

Approach to buyout funds

- Engage with, and learn from, the work being done by the private equity working group at IIGCC
- Develop and integrate climate change questions into our diligence process (potentially building on those circulated and used in 2019, with IIGCC input)
- Continue to question the firms we invest with about climate change, making sure that this is with senior investment professionals, as well as ESG teams. Over time, we will put increasing pressure on those firms for whom climate change is a material threat to their underlying sectors, but who don't have a comprehensive approach
- Senior Wellcome colleagues to message to C-suite the importance of a reducing carbon footprint and net zero targeting
- Scope to form small, targeted discussion groups on this target with major LPs
- What "best practice" looks like – our goal:
 - Enhanced disclosure – aiming for publishing portfolio companies' carbon footprints in line with TCFD recommendations
 - GPs should target carbon neutrality (scopes 1 and 2)
 - Portfolio companies should ultimately adopt their own net zero targets (at least for scopes 1 and 2)
 - Carbon reduction targets integrated into portfolio company KPIs and management remuneration.

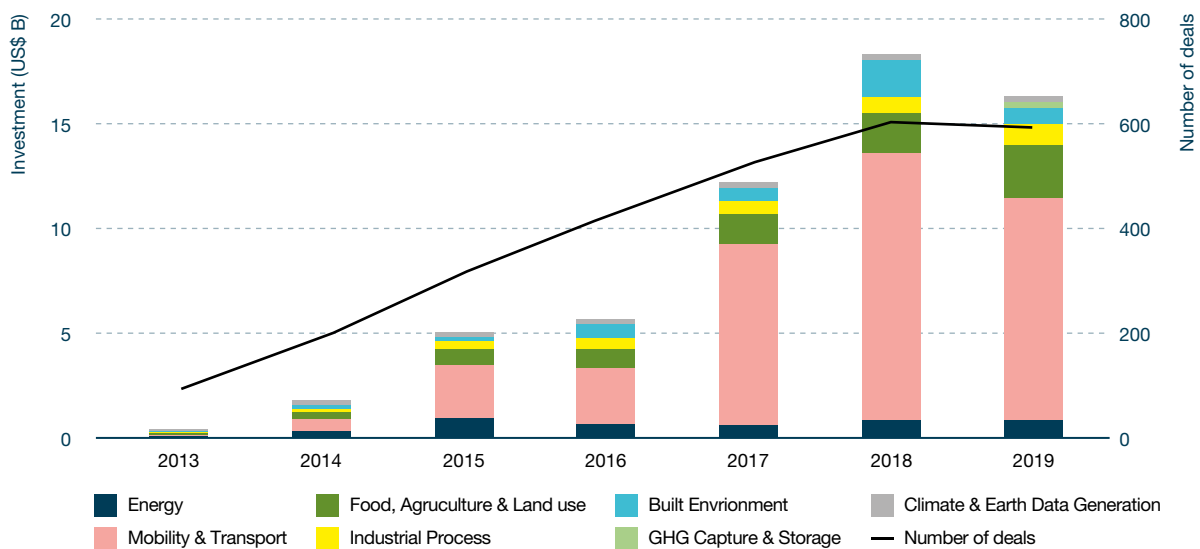
Venture capital

Venture capital funds do not, as yet, generally measure their own carbon footprints (scopes 1, 2 or 3) in any capacity, but are very aware of climate as a potential headwind and tailwind to certain industries. The majority of early-stage software companies (of the “a few coders with an AWS account” type) will have limited carbon footprints by their very nature, and it is generally noted that their companies largely attempt to be low-carbon as part of their ethos (e.g. using renewable energy) from an early stage. Some firms will attempt to encourage this at the board level where

appropriate. The most progress has been seen in larger, later stage companies which have more resources.

Cleantech investments were extremely popular during the 2000s yet failed to generate meaningful returns and fell out of favour during the 2010s. However, in recent years cleantech, or climate tech as it has been renamed, has had a bit of a resurgence, with \$16bn of funding in 2019 up from c. \$400m in 2013 (after previously peaking in 2008 at \$6bn).

VC investment in climate tech and number of deals



Source: PwC analysis on Dealroom Data

Approach to venture capital

- Engage with the VC funds which have begun to show leadership in this space and the more institutional funds which do not directly invest in climate tech to get an update of their latest thinking and approach, especially around how they engage with their portfolio companies on this topic
- Start asking climate change questions as part of our diligence process (potentially building on those circulated and used in 2019, with IIGCC input)
- A quantitative measurement of this asset class will likely be very challenging, so we should focus on a qualitative assessment of how they assess climate change risk in their investment theses/underwriting (when appropriate) and potentially add an operating piece during ODD work
- We should, over time, put increasing pressure on those firms identified to be laggards within the space.

Co-investments / direct private investments

The approach to climate change within our co-investment holdings is dictated by the fact that we lean heavily on our trusted private equity and venture partners in this part of the portfolio, relying on their investment judgement, policies and processes. While an assessment of climate change impact should be included in the due diligence process (as it will be for all asset classes going forward), it will be at a high level and focus on our partner's processes and policies, unless there is anything specific to draw out about a company or sector. Therefore, the progress made in this space will closely mirror that of the buyouts and venture capital funds portfolio. However, where possible and relevant, we will engage with management teams of individual companies, both to understand their progress and to share best-practices.

For direct private transactions, where we do not have an aligned partner, we will consider climate change considerations during our due diligence as with other asset classes. After investment (and with existing positions) we will, where appropriate, engage with management teams and other investors to try and ensure suitable policies are in place.

As discussed within the buyouts section we expect, due to their control and the mature nature of the companies, private equity firms to be able to make meaningful progress in improving their companies' climate change impact and to incorporate this into their due diligence processes. Within the venture capital portfolio, the expectation is that as companies mature and grow they will develop appropriate climate change policies (with our trusted partners encouraging this at board level). However, they are unlikely to have everything in place when they are still emerging as young companies (especially for ones with asset-light models), particularly in the near term.

Approach to co-investments/ direct private investments

- Engage with, and learn from, the work being done by the private equity working group at IIGCC
- Develop and integrate climate change questions into our diligence process (potentially building on those circulated and used in 2019, with IIGCC input) in line with those used in the buyouts and VC work
- When appropriate, continue to influence our partners after the due diligence phase (aligned with our buyouts and VC work)
- Develop a series of case studies to help illustrate best practice
 - Where appropriate, engage with company management to understand the measures they are taking and to encourage them to take up best practices.

Hedge funds

We have not come across any managers that are measuring their own carbon footprint (scopes 1 and 2), nor which have set targets for their scope 3 emissions i.e. underlying investments. Given the shorter-term time horizons of hedge fund managers, they rarely consider the longer-term implications of climate change as part of their decision making. At best, managers may consider the social cost of carbon when analysing future expected returns on energy-related positions.

Within the industry, best practice currently involves thorough assessment of ESG, particularly environmental factors, as a central input into active decision making.

Aside from their typically short-term time horizon, part of the challenge for certain managers (e.g. multi-strategy, macro and credit), is that they will own instruments for which calculating carbon footprints is very challenging, such as sovereign bonds or commodities. There is a lack of a consistent standard here, and managers would argue it would be of limited value add to their investment process at present.

Approach to hedge funds

- Due diligence efforts, and conversations with managers, will focus on a qualitative assessment of how they integrate climate risks and opportunities into their investment decision making. For example, we will question managers on how they factor in a price of carbon in their underwriting and how they consider the risk of a growing body of ESG capital penalising carbon intensive holdings. We will also monitor their exposure to carbon intensive sectors/assets and understand whether reducing this footprint forms part of their reason for holding, for example, are they willing to engage with the company (this may be challenging given some hedge funds' shorter time horizon)
- Engage in industry dialogue in how to account for the carbon footprint of short and derivative positions, as well as non-equity positions (credit, rates, commodities).

Property

Current status of sector

The built environment contributes nearly 40% of global carbon emissions (source: IEA, UK Green Building Council). Emissions are primarily generated from materials used and energy consumed in development and refurbishment activities (commonly referred to as 'embodied carbon') and from powering, heating and cooling buildings by occupiers ('operational carbon'). Most building-related emissions, often up to 80-90% of a property's overall carbon footprint, are outside the owner's immediate control as they are generated by its supply chain or tenants (i.e. scope 3 emissions), a specific challenge for the sector to achieve net zero.

Operational carbon can be reduced to net zero by improving the energy efficiency of buildings and sourcing renewable energy. Embodied carbon can be reduced by retaining or reusing existing materials and improving building design and materials used in order to lower the carbon emissions; although carbon offsetting the residual carbon footprint is currently needed to achieve net zero.

Since 2019, it has been UK law for the country to reach net zero greenhouse gas emissions by 2050, using sequential 5-year carbon budgets to define Britain's pathway. To date, five carbon budgets to 2032 have been set in law, while a sixth to run from 2033 to 2037 is under review and the first to align with achieving net zero emissions by 2050.

For the built environment to achieve this target, there is existing regulation to improve the efficiency of both residential and commercial buildings, which we expect to become more stringent in future years. For example, the Future Homes Standard, currently at the consultation stage, seeks to introduce measures for new homes to be 75-80% more carbon efficient than existing regulations.

We are starting to see property valuations incorporate carbon credentials of assets with an implicit 'green premium' or 'brown discount'. We can expect this dynamic to increase as there is an accelerating demand or requirement from investors and occupiers for less carbon intensive properties. Hence, increasing the risk of stranded property assets for which retrofitting or redevelopment to reduce carbon intensity becomes increasingly uneconomic.

Current best practice

The Building Better Partnership, a collaboration of leading UK property investors with a combined £240bn assets under management, defines a net zero target as those directly controlled (i.e. scope 1 and 2) and generated by parts of its supply chain and tenant base that they can realistically influence, but not scope 3 emissions in their entirety. Importantly, this definition includes embodied carbon generated by refurbishment and development activity

(though not historical embedded carbon), tenants' energy consumption (electricity and heating), and refurbishment and fit-out works.

This framework has supported leading market participants to make significant progress in understanding their current carbon footprint and setting a pathway to becoming net zero carbon. An increasing number of property owners are targeting being net zero by 2030 for their direct (scope 1 and 2) emissions, with the most ambitious also including their indirect (scope 3) emissions that can be realistically influenced. All are using carbon offsets within their net zero pathways to eliminate the residual carbon, especially the harder to reduce embodied carbon from refurbishment and development activity.

Current status of our portfolio

To date we have not measured the carbon footprint of our direct property holdings or asset-backed operating companies. Nonetheless, climate risk is considered by most of our property managers and operating companies, typically as a separate risk on the respective risk register. Further, climate risk is already being addressed through energy efficiency or on-site renewable energy generation initiatives, driven by economic imperative or regulatory requirements. Though we have yet to explicitly consider the risk of rising sea levels, in certain scenarios, to our property assets. Assessment of this

risk will be integrated into our wider approach to managing climate risk for these holdings.

We acknowledge that the status of some of our property holdings may make net zero more challenging to achieve and may mean offsetting is required to eliminate residual operational carbon, as well as embedded carbon. For example, listed building regulation may restrict upgrades to reduce energy usage, and we will be limited in our ability to upgrade buildings or influence our tenants' behaviour for properties subject to existing leases.

For our direct property holdings, we will define a net zero carbon target that we can directly control (scope 1 and 2) and emissions from development and refurbishment activity (that are considered within scope 3). We plan to monitor and influence emissions generated by our tenants, though at this stage exclude these emissions from our formal net zero target. We also need to carefully assess the physical risks that property might be exposed to, so that we can be ahead of the curve with our investment decisions.

We will need to engage specialist consultants to assess the physical risks climate change may pose, measure the carbon footprint, and provide strategic advice on a net zero pathway. We are at the early stage of determining the scope of specialist advice that we require, some of which is likely to be recurring (i.e. carbon footprint measurement) and the balance one-off in nature (i.e. setting a pathway).

Approach to direct property

- Measure the carbon footprint of our estate to establish a baseline and identify the best providers for this
 - Set a net zero carbon target that:
 - Includes emissions that are directly controlled (i.e. scope 1 and 2)
 - Aims to include embodied carbon emissions generated by refurbishment and development activity (though not historical embedded carbon)
 - Monitors and seeks to influence tenant's energy consumption (electricity and heating), refurbishment and fit-out works except where we have limited control or influence. However, this is not within the formal net zero target
 - Excludes tenants' emissions that we cannot realistically control (e.g. from our residential ground rented freeholds or tenants' water consumption or waste)
 - Establish a pathway to a net zero carbon target, consistent with the Paris Agreement
- and UK legislation. It is likely the pathway will include:
- Transitioning all landlord procured energy to be 100% renewable
 - Investing in on-site renewable energy and building energy efficiency measures
 - Reducing the carbon intensity of our development and refurbishment activity
 - Introducing green lease clauses (where practical) to commit our tenants to purchase renewable energy
- Monitor the proportion of our suppliers that have their own net zero targets
 - Consider other building-related carbon emissions outside of our net zero definition and assess whether practical to include these emissions with our target in the future
 - Engage with IIGCC workstreams on measurement, setting and achieving a net zero target for real estate
 - Identify providers to help us assess physical risks to our real estate assets, albeit a medium-term goal.

Operating companies

Our directly-held asset backed operating companies cover different sectors including agriculture, marinas and boatyards, and strategic land development. The boards and executive management teams of each company are very cognisant of their environmental impact, and carefully consider and manage this part of their risk management framework and wider strategic plans.

The board and management of each company we own are currently considering how a net zero strategy could be adopted, with a view to establishing a formal target date and putting in place a credible pathway to achieve this. The current steps are to establish a carbon emissions baseline, against which progress will be monitored. The ease of doing this will vary by sector depending upon how far clear standards have already been established in the industry.

As this issue rises rapidly up the agendas in both the agricultural and housebuilding sectors, we can expect more clarity on how net zero might be achieved. The boards and management teams will then assess what the appropriate definition of net zero might be such that it includes emissions that the companies can reasonably influence.

Cash and liabilities

The carbon footprint of cash depends on the form in which it is held. The carbon footprint of money market funds will depend on the instruments within these, whether investment-grade corporate credit or sovereign bonds. We will work with our cash manager to understand the footprint of our holdings.

Approach to operating companies

- Climate change is considered as part of each company's risk report, and should be considered as part of their capital allocation decisions
- As UK registered companies need to report in-line with TCFD by 2025 (possibly as soon as 2022-23), each board will need to ensure their risk management, strategy and governance is appropriate to address climate related risks and opportunities
- In the near term, we will work with our subsidiaries to establish which scope 3 emissions will be included in our net zero target, as more consistent standards evolve
- Establish a baseline footprint for our operating companies as the measurement standards and the resources around this evolve.

Endnotes

1. As at 30th September 2020 (source: Wellcome Trust Annual Report 2020)
2. Charted against S&P Global LargeMidCap index. Whilst we do not rely on benchmarking to dictate investment decisions, Trucost's reports use a selected benchmark as a measure of relativity for carbon footprints
3. Technically, our indirectly held assets (i.e. the investments made by our third-party managers) are the scope 3 emissions of our managers'. However, in order to achieve maximum real-world impact, we propose that we should look through to the underlying investments, and hence include the scope 1 and 2 emissions of our managers' portfolio companies as part of our target. It should be noted that emissions from our investment portfolio are classed as Wellcome's Scope 3 emissions.
4. For our indirect equities we have used a materiality threshold: we have included in this calculation positions that are >\$30m as well as positions of any size that we already hold directly
5. Company-defined targets. Note that there are small number of companies that will have a science-based target but not a net zero target; these require further examination but are likely to be those that have a relatively low footprint and therefore do not feel the need to set a net zero target.
6. <https://sciencebasedtargets.org/companies-taking-action>
7. Includes companies with targets set and certified by SBTi, and excludes those with a commitment to set science-based targets
8. It is expected that Wellcome will need to comply with TCFD recommendations by 30th Sep 2022.
9. Mark Carney: "... This could turn the existential risks from climate change into the greatest commercial opportunity of our time. Private finance, including pension funds, will provide the \$3.5 trillion needed annually for investments in sustainable infrastructure and fund the innovation and re-engineering of business in every sector of the economy."

Wellcome supports science to solve the urgent health challenges facing everyone. We support discovery research into life, health and wellbeing, and we're taking on three worldwide health challenges: mental health, global heating and infectious diseases.

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